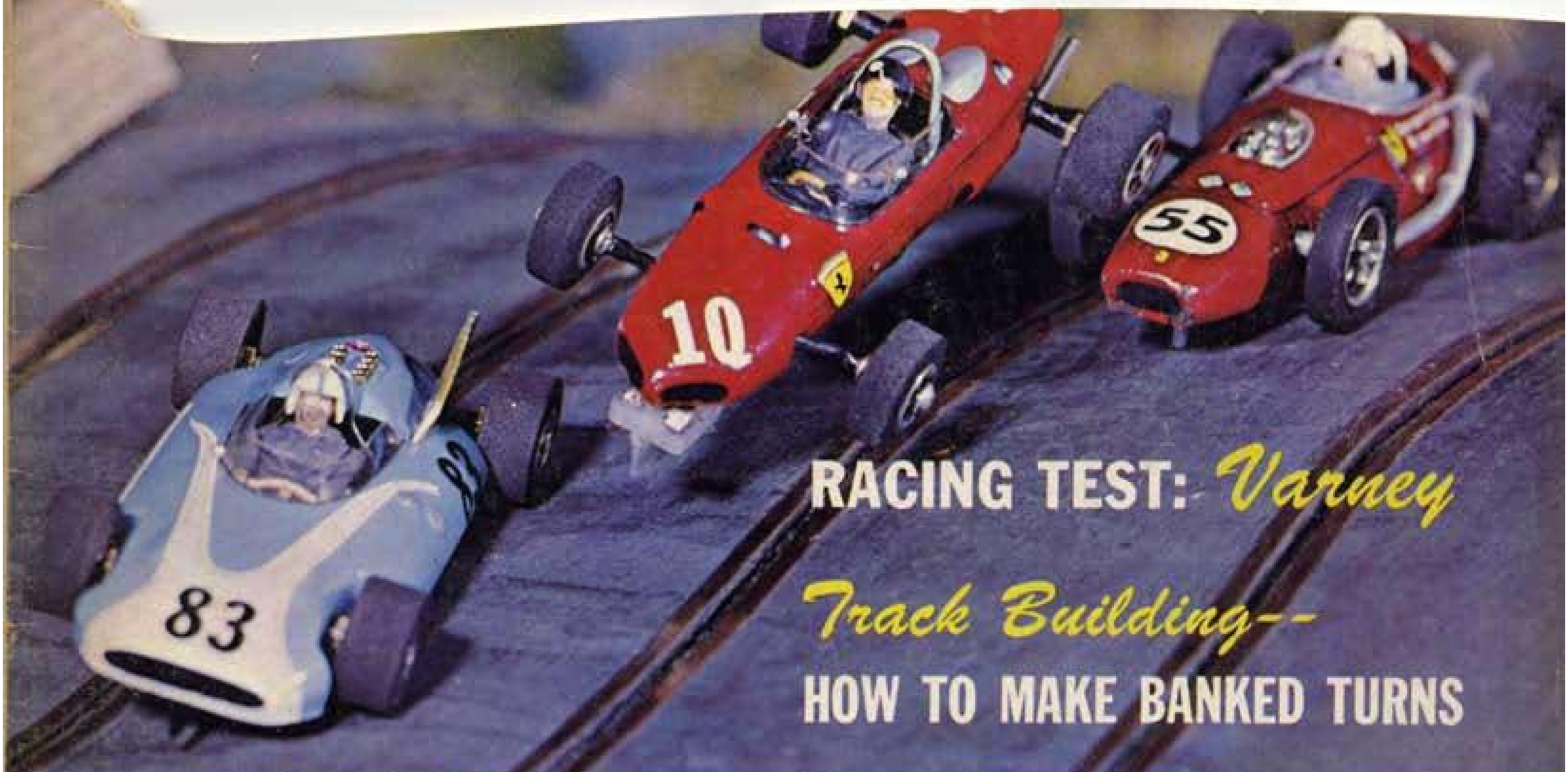


RACING TEST: *Varney*

Track Building--

HOW TO MAKE BANKED TURNS

Model Car Science May 64

Exciting New Models On Their Way To You



HOW YOU CAN BUILD CARS FROM SCRATCH

MAKE DRAG RACERS from your STOCK MODELS



It's the most fantastically detailed car from Revell yet!

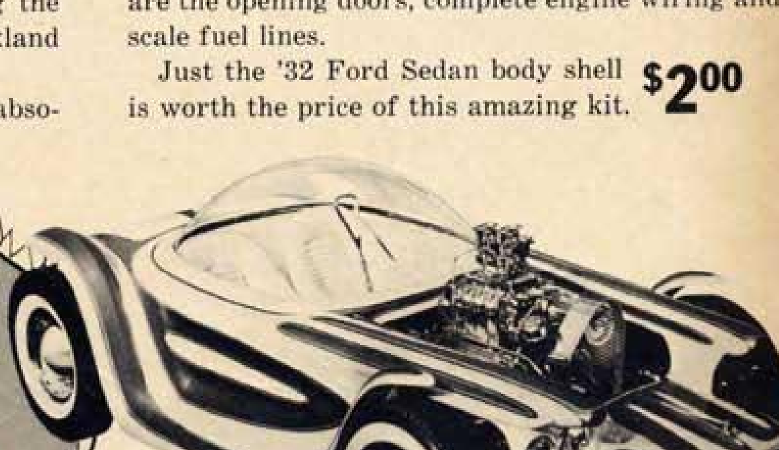
If you've got a model show coming up soon, this is the one you'll want to build. Bob Tindle's "Orange Crate" has turned over 130 on the drag strip and also won top custom show honors, including the seven-foot-tall Sweepstakes trophy at the Oakland Roadster Show.

Revell has modelled "Orange Crate" with absolute authenticity right down to the last nut and bolt. And this kit has super extras.

Under the removable hood is a "blown" Olds engine. The entire one-piece body shell is hinged to lift over the chassis and suspension for display. Lots of speed goodies, too, plus mag wheels, chrome tubular chassis. But that's not all. The real extras are the opening doors, complete engine wiring and scale fuel lines.

Just the '32 Ford Sedan body shell is worth the price of this amazing kit. **$2.00**

Ed "Big Daddy" Roth's "BEATNIK BANDIT"



It's the latest of those too-much "Rothtomized" show machines

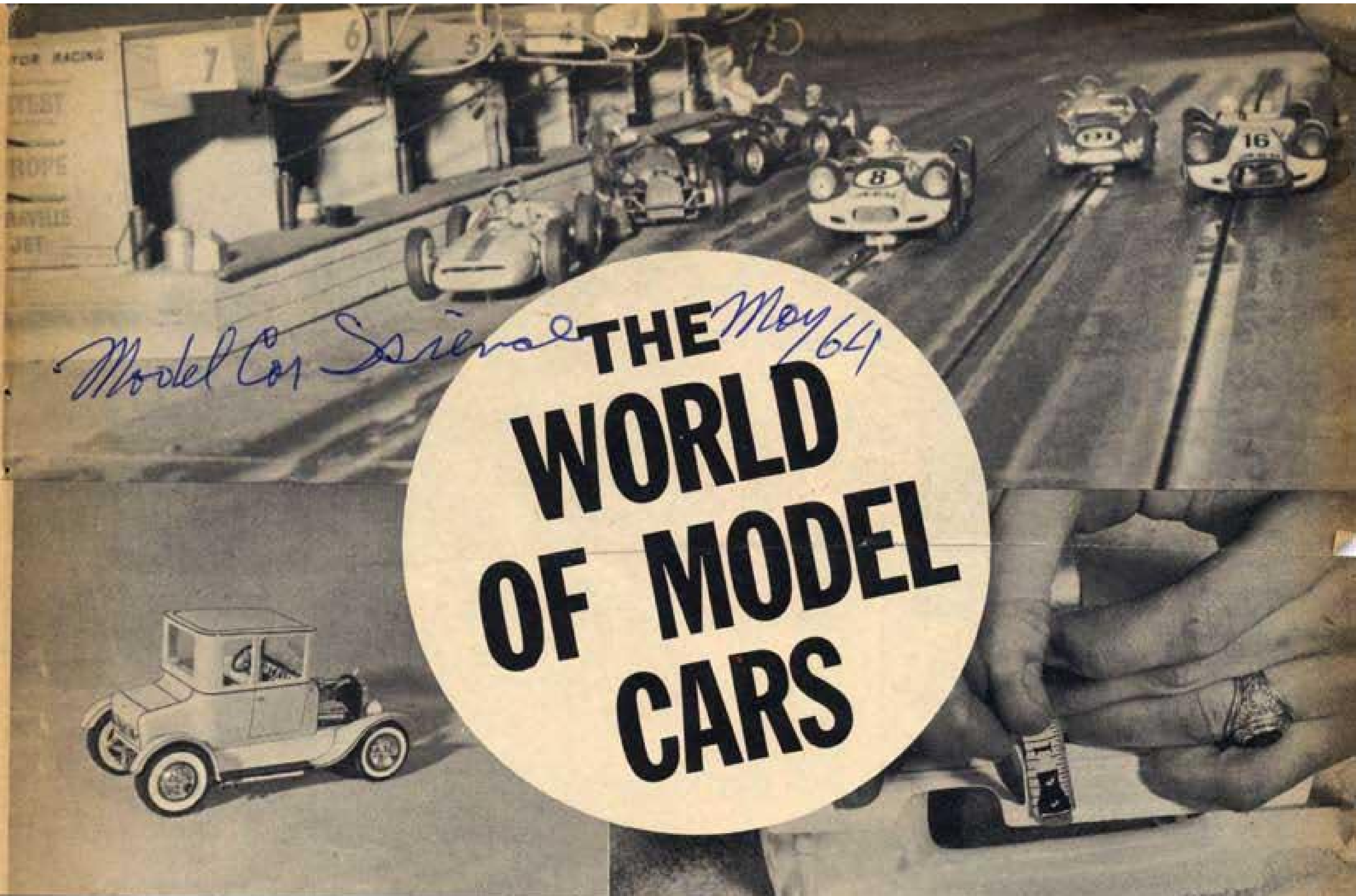
"**B**eatnik Bandit" is the world's sleekest expresso bean hauler. "Big Daddy" tells us that you can build this kit as a custom-show car or as a sports-racing special. All the extras are right in the kit for you to go either way with the body, mill, interior and suspension.

If you can't make up your mind which version to build, buy two and build 'em both. **$2.00** each

they're by

Revell

of course



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model car *Science*

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COVER — If you haven't discovered the thrills in table top racing you've been missing one of the most thrilling of all hobby-sports. There are ideas galore for the boy on an allowance or the millionaire playboy in the Table Top Racing Section starting on page 34. Have you ever seen a sharper looking '40 Ford than this red AMT? This shows what a little time and effort can do in assembly.

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MODEL

Problem Parents

I have wanted for some time now, to get a 1/32 scale road-racing set, yet, one thing stands in my way. My parents won't let me buy one because they say: "What fun can you get out of running a car around a track?" They also contend that the slot racing sets are too expensive. I have talked with them about making my own track, and they don't think I can do it, and won't let me use a router anyway. Any suggestions?

Peter Beckman
Rock Island, Ill.

The decision about what is too expensive must be left up to your parents, but the best way to answer their statements about the fun of driving a car around the track is to find a track in your town and show them how much fun slot racing can be. I think that once they've tried it, they'll buy it!

Slot Racer Classifications

Is there an answer to the classification of slot racers? We are greatly interested in setting up some sort of competition but find that rules, regulations and classifications vary from club to club.

In this area, cars are generally powered by the largest motor that will possibly work, bodies do not fit, it's just a mess! A Porsche for instance might be driven by a large Micro which bears more resemblance to a Ford engine rather than something in the under 2 litre class.

Carl H. Gatske
Salinas, Calif.

1/32nd Fan Talks Back

Read Budd Andersons letter in Model Mail and just had to write. It seems he missed a few points here and there. I would be the first to agree with him that complete rules must come. However, such an organization would have to be national and could well write a set of rules for all sizes. As I am not personally interested in the small HO sizes I would like to comment on the 1/32, 1/25, 1/24 scales and follow through his letter.

His reason for choosing 1/25th is unfounded. There are just as many motors, accessories etc., available for both 1/32 and 1/24 as there are for 1/25. Now to bodies, I sure can't argue him about stock cars, 1/25th has them. But . . . percentage wise, who wants 'em? I would list any form of racing car more popular. Of stock cars only Ford and its close competitors would be chosen to be built up. And these are static shelf models. As to sports cars:

MAIL *

there again are many piece shelf models. In powered ready to race GP you have only the two very popular Revell cars. This doesn't sound like a big choice to me! If he wants to think big how about 1/24? Granted there are not many stockers to choose from, there are loads of Sports and GP static models to choose from. Also, Strombecker is coming out with a powered 1/24 Lotus — Ford Indy. Another thing, 1/24th is easier to scale out for the home builder being ½" to the 1'. It will also run on the same track as 1/25th so I rest my case on this size.

Now, about 1/32nd: he said detail is lacking; suggests plastic motors with wiring and the fact you can't build the low cars like Lotus 23 or narrow like Lola or Brabham. Who is he kidding with the plastic motor jazz? Like, who opens the hood. Most cars I have seen are full from electric motor, frame, guide and gears. He said he has been racing here and there and everywhere. In 1/32 scale, Lotus 23 is the car to beat. It has everything in its favor for slot racing. It will probably lose out soon to the wild Lotus 30 but then according to Mr. Anderson, you can't build one. PS — I have seen more real hauling current formula cars in 1/32 scale also, like holding track records. A Mickey Thompson Indy is a natural for winning also.

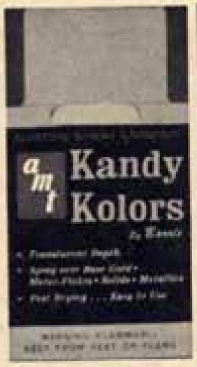
About Indianapolis. I don't know the people, maybe they are out of scale. That doesn't mean they have to be. At any rate I have been around real racing long enough to know there are many dirt trackers that could well be bigger in size than a current Indy car.

Mr. Anderson says the logical answer is 1/25th scale. I say, take your choice. I would rather run 1/24th than 1/25th. I would also rather run 1/32 than either. Reasons: I have run both and find 1/32 more challenging, more realistic in racing and more organized. I can mail a 1/32 car to various parts of the world and compete in races where International rules exist. I can race now, I know where I am. I suggest, Mr. Anderson get his 1/25 followers together, write National and International rules and schedule races. When he gets this far and it looks better than 1/32, I'll join him, and race him to death. In the meanwhile, I'll just keep running my stable of 1/32 size cars.

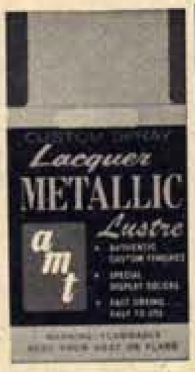
Sincerely,
J. C. Benedick
Long Beach, Calif.

WLD!

Amazing breakthrough! ONE-STEP Metal-Flake Lacquers—Devil's Red, Royal Blue, Emerald Green, Aztec Gold, Fire Orange, Frost Grape, Root Beer, Ultra Violet, Peacock and Lemon Lime.

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NOW! AUTHENTIC CUSTOMIZING LACQUERS IN HANDY NEW SIZE— NEW LOW PRICE !

Wait'll you see what these new AMT spray lacquers do for your models! It's fantastic. Imagine getting a Metal-Flake finish with only one spray application! And look at all the other way-out colors and finishes you can choose from now—all authentic customizing lacquers! You'll get faster drying and deep-down lustres that'll buff up just like a pro's. (They're recommended by King Customizer, George Barris.) AMT's new protective packaging insures a fresh, full can of lacquer. So what are you waiting for? Head for the store where you get AMT authentic car models and eyeball all the wild colors on the front of the AMT rack. Get your favorite way-out finish today! **AMT Corporation, Box 55, Troy, Mich.**

amt

AMT CUSTOM SPRAY
Lacquers

NEW TO SCALE

Two new product lines by X-acto – Micro Saw blades and Safety Guards – are scheduled to appear on hobbycraft counters in the near future. The Micro Saw can be used as both a jeweler's saw and a sabre saw. X-acto's Safety Guards are designed to make handling of X-acto knives #1 and #2 safer and more controllable.

The Micro Saw, for customizing and cutting turns and corners in plastic and wood, will retail at 60c for the blade and handle together, and 60c for a refill package of five blades. The Safety Guards are available to fit all X-acto #1 and #2 handles at 40c and 50c respectively.



Styling and racing features from the exciting Corvette "Shark" have been added to the new 1964 Corvette Sting Ray Convertible 3-in-1 kit from AMT.

Complete with a fully-detailed trailer, the Sting Ray kit offers stock, custom and racing versions of the popular roadster.

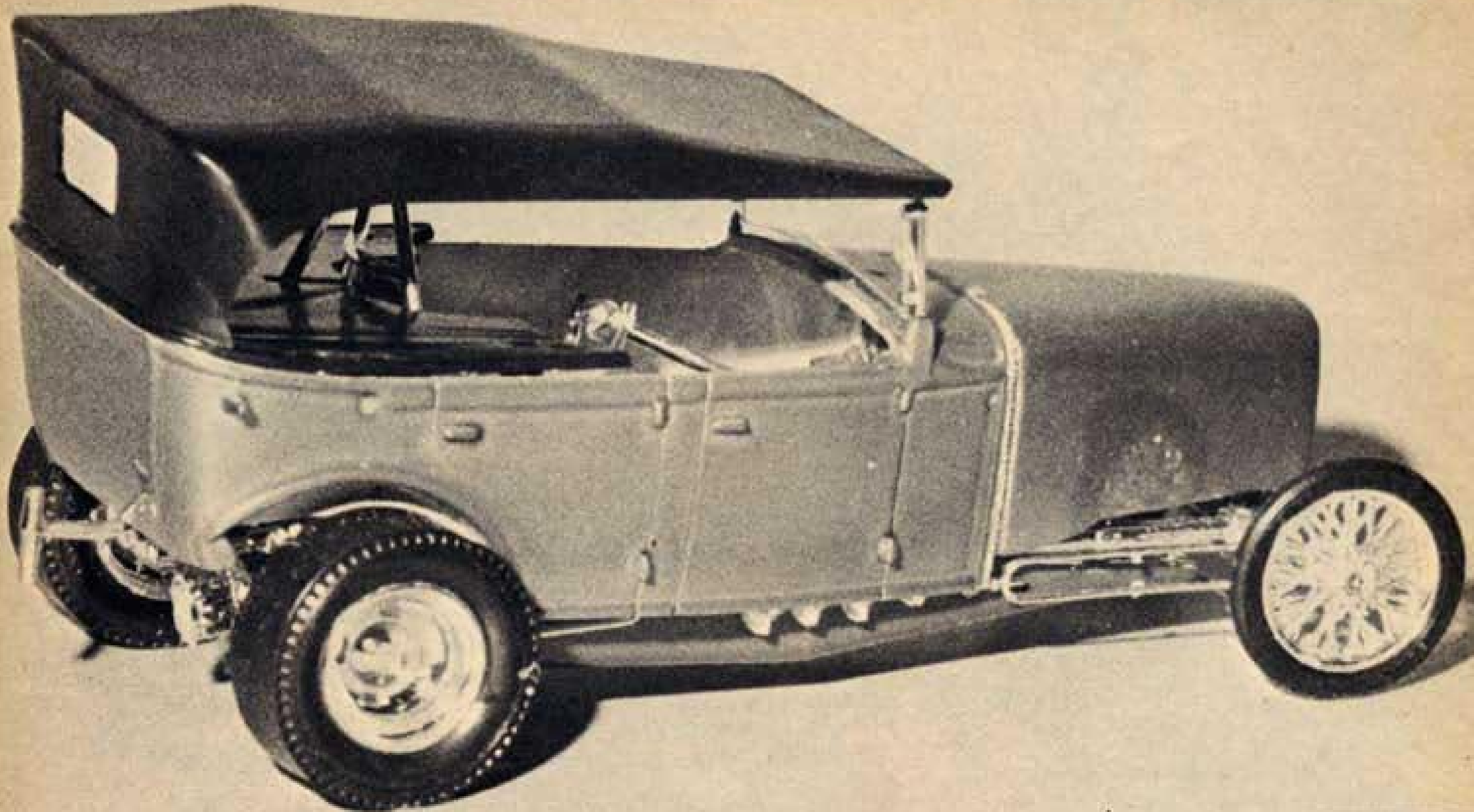
Among the features are the fuel injection engine; dual four-barrel carburetors; and Hedman headers.

The custom fastback with restyled top and backlight may be converted to a stabilizer bar. The head rest is taken from the original Sting Ray, and the side exhausts from the Shark. A full tonneau cover also is included.

The new "Hot Slot Line" of all-transistorized, solid-state hand control throttles, developed by All-American Hobby-Tronics Corp. of Van Nuys, Calif., features many of the newest electronic developments including solid-state circuitry, instantaneous braking and full power.

Three models of this sensitized handgrip control are available to suit the needs of the serious enthusiast. The Standard Model with electronic braking action sells for $13.95, Deluxe Model with dual breaking is $15.95, and a Custom unit with both dual braking and power boost sells for $17.95. For additional information, contact Downey Enterprises, Inc., 9866 Helena Ave., Dept. M.C.S., Montclair, California.





Try a TOURING CAR FOR DRAGS

In drag racing, cars of all types have been converted to dragging machines. Here is a Model A Phaeton that has easily been adapted to a racing frame and engine.

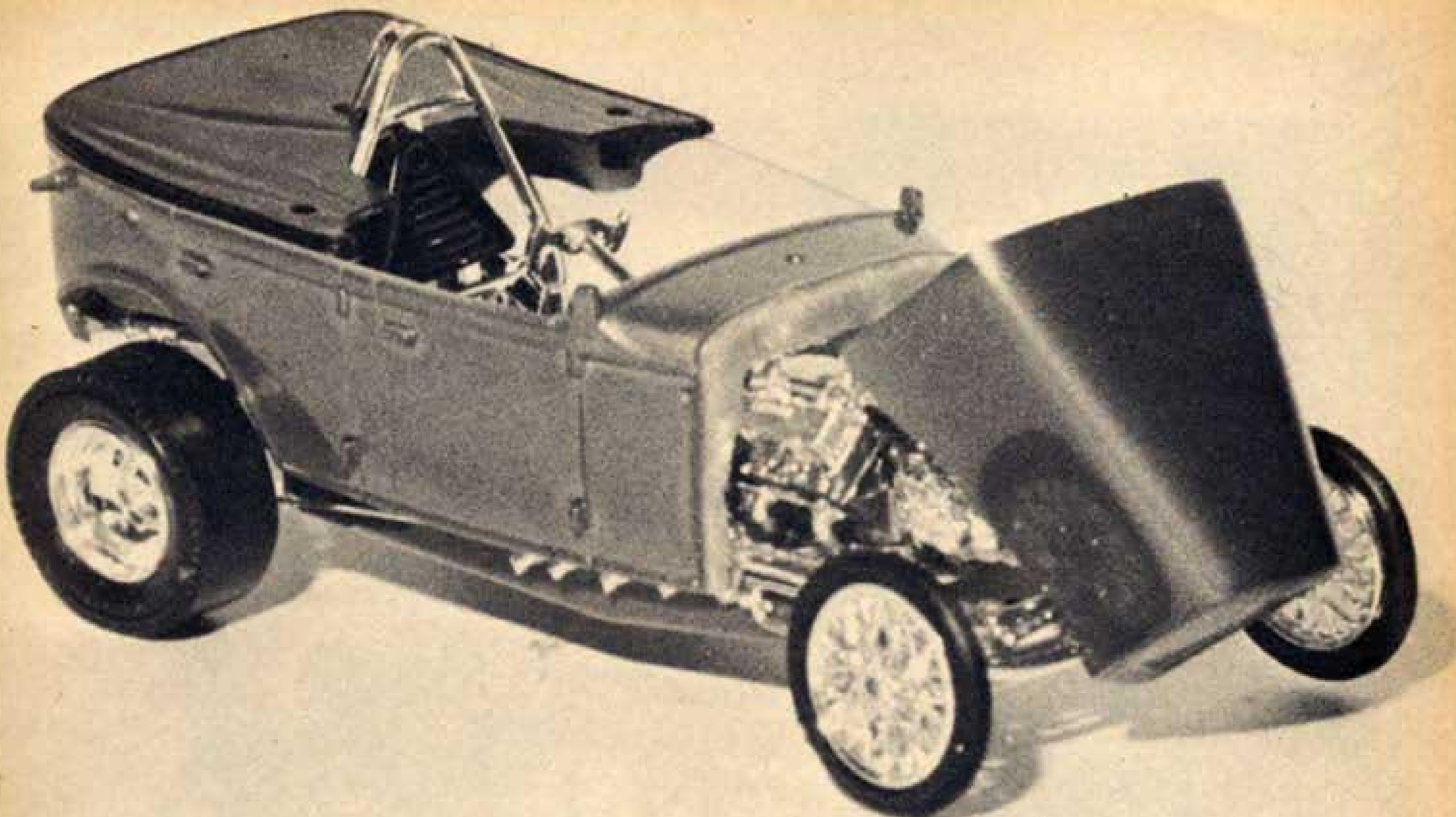
To construct this model, there is no need for special tools, just razor saw, files, sand paper and putty. Kits that will be needed are Monogram's 1930 Ford Phaeton Customizing Kit and Revell's Orange Crate Kit. Be sure to get Monogram's $1.98 kit because the cheaper $1.49 kit does not have the Model "A" hood or tarp which are required.

First, remove both wheel wells from the Model A Touring car. This can be done by cutting up to the top of the well with a razor saw. Make separate cuts 1/8" wide up to body side. Chip these pieces out and file smooth with a half round file. Sand file marks out with #320 sandpaper. Now file the inner sides of the wheel wells flat. These are made flat so indented wells can be glued in place properly. These wells are obtained out of AMT's Double Dragster Kit. Piece numbers are F26 and F27 in this kit. With a razor saw, cut horizontally with flat ridge that angles off from main body of wheel wells. File these bottoms straight and smooth.

After wheel wells have been cut, glue right and left wells to inner panels of touring body. There should be a ridge left on body from removed well. New wells should just fit over these ridges. Back portion of body will have to be shortened so as to let body sit further down on frame. Measure 1" down from top of body, mark with straight edge and cut this piece off evenly.

Using the Orange Crate Kit, assemble frame and engine as shown in instructions and remove the gas tank from top of blower front. The other modification is to use Revell's Motorcycle tires and wheels on the front axle. This can be done easily by gluing rivets to inside of wheels. The belly pan from this kit should also be painted and glued to bottom of frame.

By checking back to Revell's Orange Crate instructions, note how body is hinged to frame. Now secure rear body hinges #81. These should be placed in frame holes in hinged position. Place touring body on frame and push body forward until hinges meet the body. With pencil, make a small mark above these body hinges. Now remove body and hinges and glue hinges under pre-marked area. Let these hinges set up until fairly dry and place body over frame again to see if hinges align with frame. If they don't, these hinges can be moved for proper alignment without regluing.

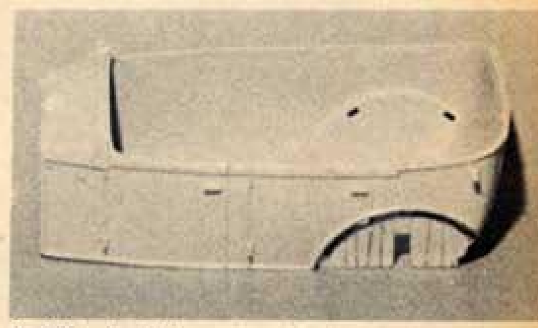


Exclusive New MCS Tips on Making Drag Racers from Your Stock Models

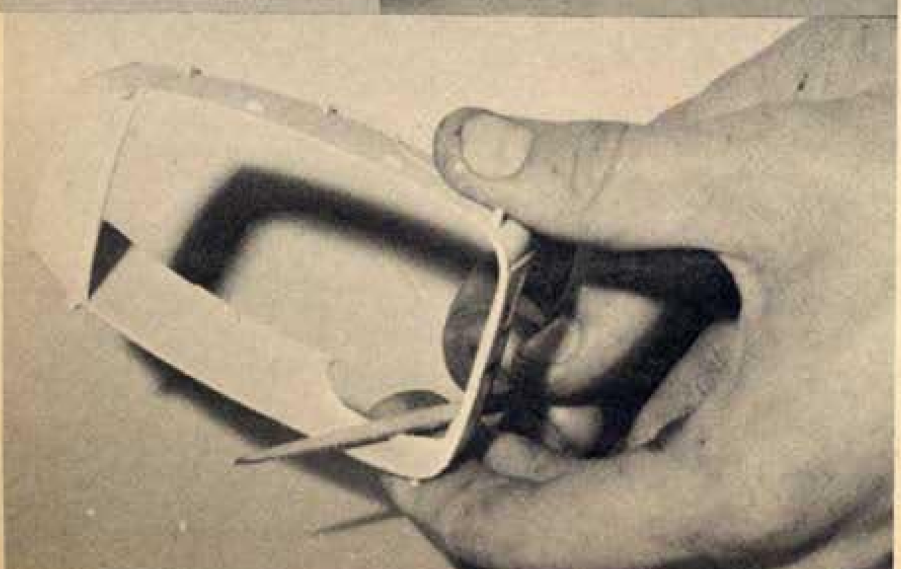
by Don Lenaker



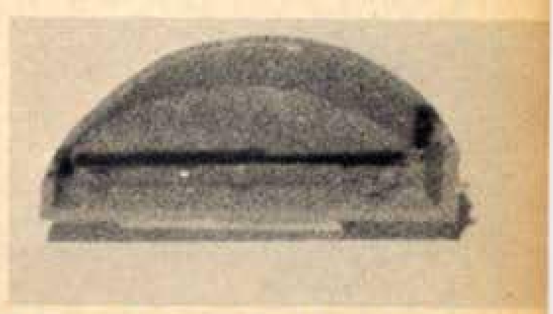
1. Model kits that will be needed are Monogram's 1930 Ford Phaeton Customizing kit. Frame and engine will come from Revell's Orange Crate kit.



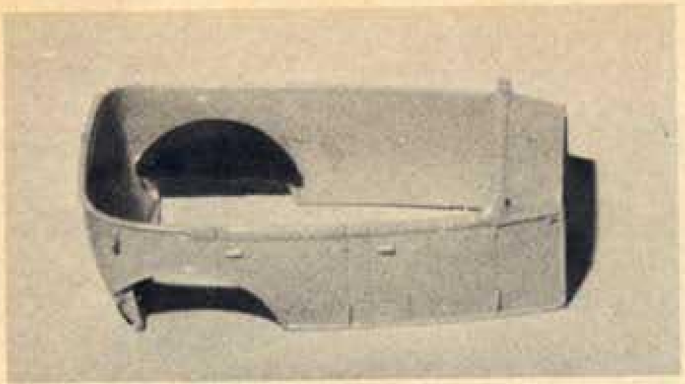
2. Wheel well is to be removed by cutting with razor saw up to body side. This is done by making 1/8" cuts up to body side and chip these pieces out and file smooth.

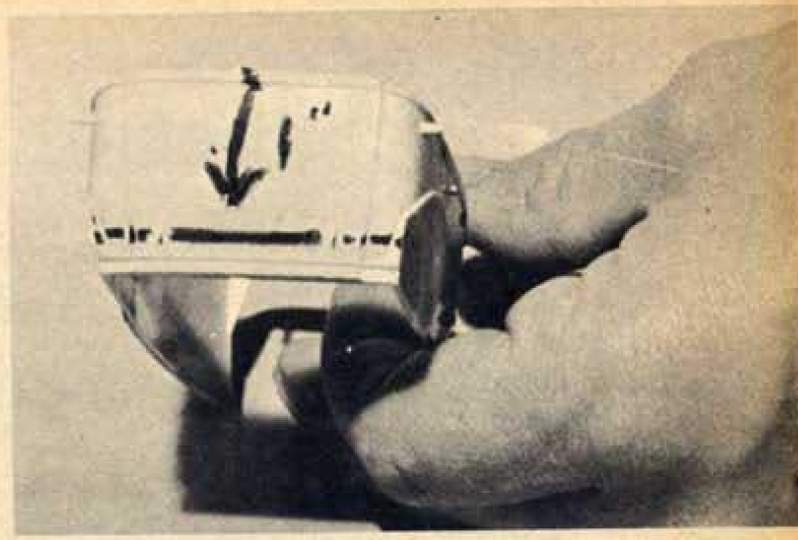


3. AFTER WHEEL WELL IS REMOVED, FILE INNER SIDES SMOOTH.



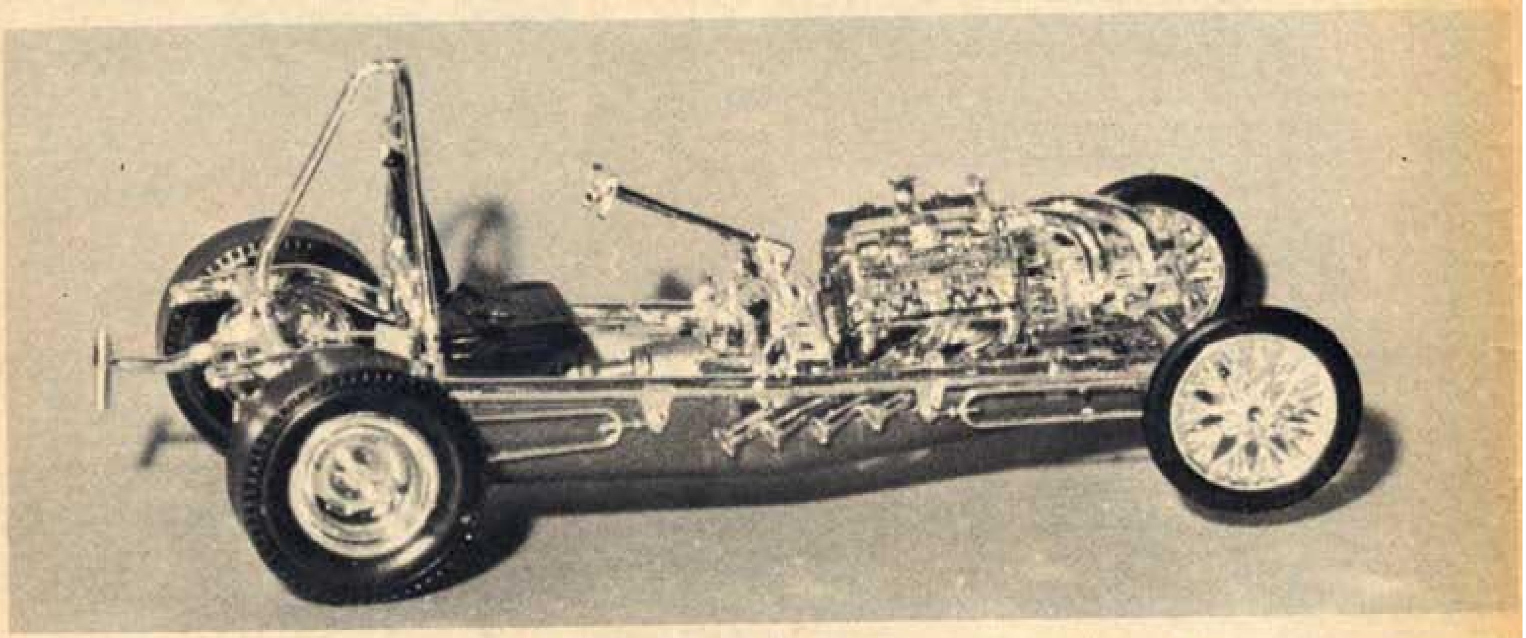
4. Prepare indented wheel wells from AMT's Double Drag Kit by removing lower portion where it angles off.



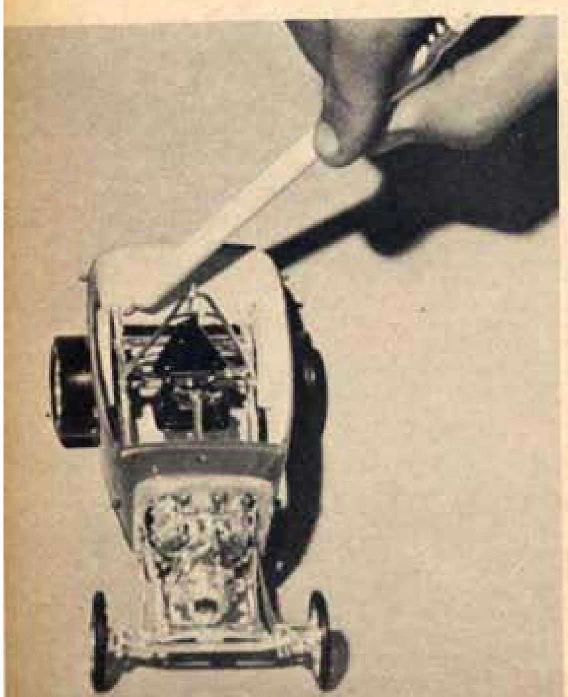


5. After wheel wells have been cut, glue these to inner panels of body.

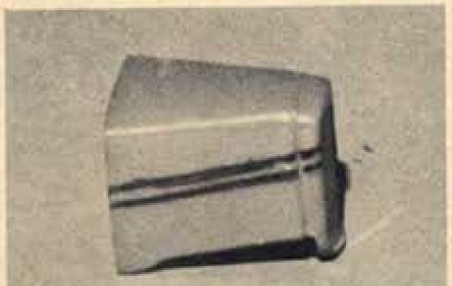
6. Measure 1" from top of body and cut evenly with razor saw. Remove this lower piece from body.



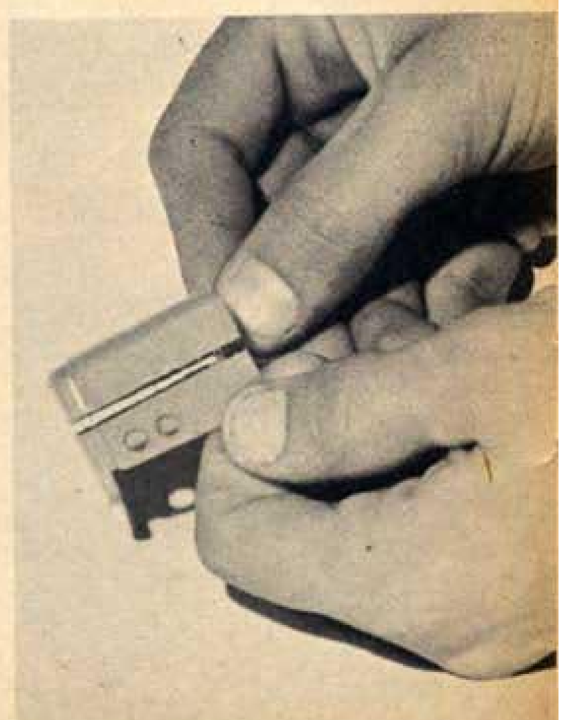
7. Orange Crate frame is completed with engine and Revell's wire wheels.



8. Place body hinges onto frame facing up. Place body over frame and mark area where hinges touch body. Hinges should now be glued to body.



9. Orange Crate hood and grill are glued and marked for 1/4" section.



10. Sectioned hood should have edges filed smooth and glued back together.

Orange Crate hood and radiator shell are glued together and set aside until completely dry. A 1/4" section should be taken out of this hood and grill piece. This can be taken out of the middle of the hood. Mark this piece first as shown in picture and cut with razor saw. File this area flat and straight. Glue these sections back together and let dry. Take the Model A hood from Touring Kit and remove 5/32" from rear of this hood. Be sure this piece is cut straight. Glue this piece to back of Orange Crate hood as this hood will not reach all the way back to touring body.

Glue radiator shell hinge part #95 in normal position. Putty in cut areas and holes of hood for injectors.

Hood should be filed to new shape and sanded until smooth. This will be the only hard part of constructing this model. Use a sanding block to prevent from getting low spots while sanding. Finish off with #600 sand paper.

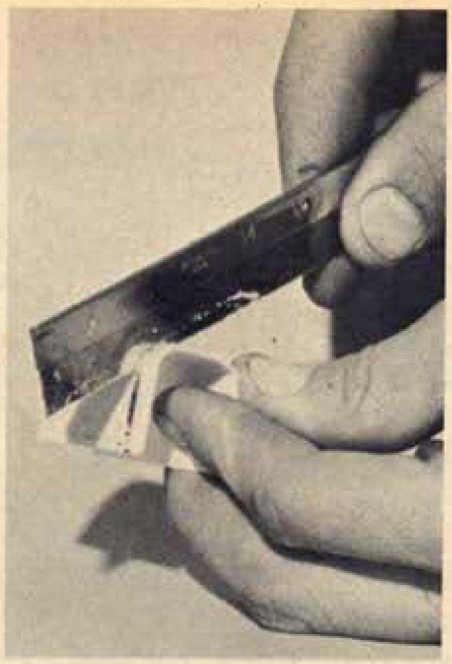
To streamline top of body: tarp from the Touring Kit is cut to shape by following the full scale drawing. Simply trace this drawing on the tarp, cut out with razor saw, and file smooth.

Finish body and hood off by sanding with #600 wet-and-dry sand paper and give these pieces a heavy priming. A nice paint job will just set this model off. Some good painting tips can be found in the February 1964 issue of MCS on pages 16-18.

To give this model a sort of "Show and Go" look, the stock windshield and top can be put on also.

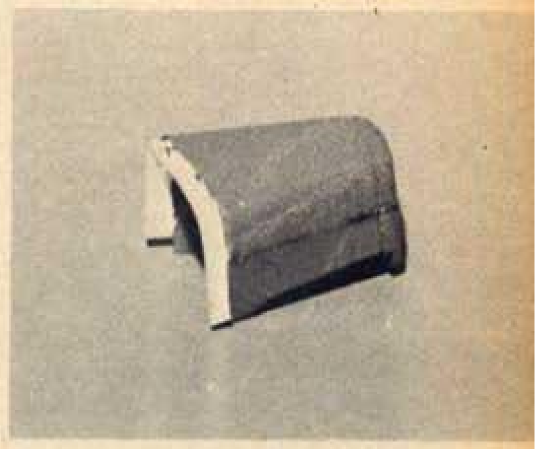
The completed model has a hinged hood and body. Hood will sit up straight without any braces, but to keep body up, obtain a thin piece of chrome wire about 1½" long. Bend a very tight half circle at one end. This is to be slipped in hole on top of radius rod on the left side of frame. With a pin vise, drill a very small hole in bottom edge of car. Now when body is in hinged position, this piece of wire can be swung up into position and hold body up. When body is in normal position, brace can be laid on top of frame.

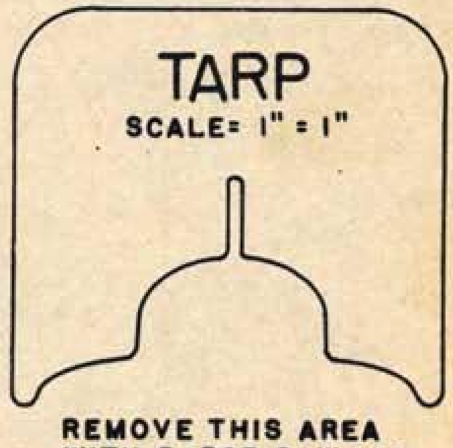
If the builder wishes to go a little further with this model he can try complete moulding in touring body. Easy hints of how this is done could be found in the March, 1964 issue of MCS.



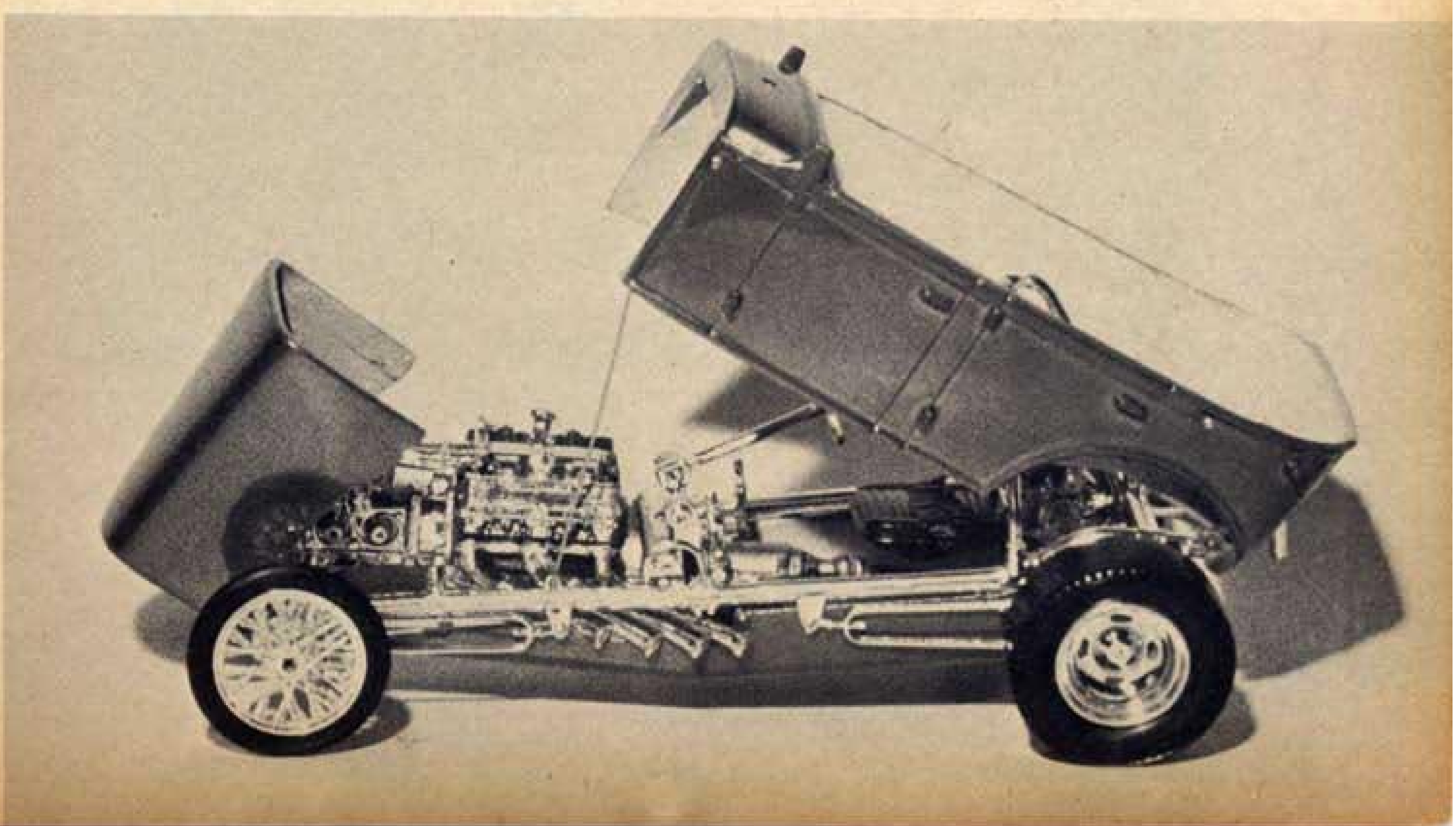
11. Model "A" hood from Model "A" kit is to have 5/32" of back removed. Be sure this piece is cut straight.

12. Trimmed section from Model A hoods is to be glued behind sectioned Orange Crate hood.

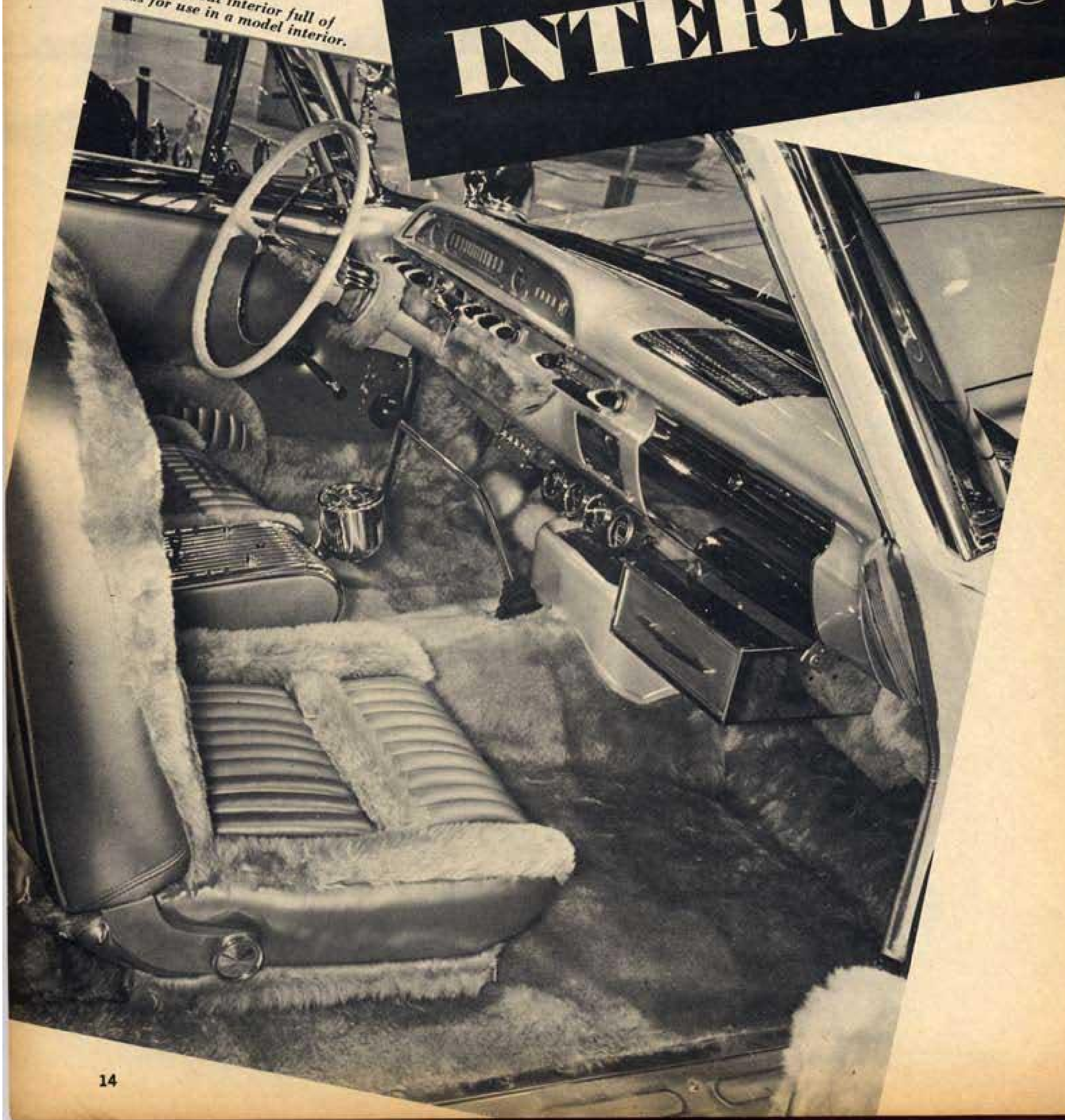




REMOVE THIS AREA WITH RAZOR SAW AND FILES.



Superior INTERIORS



A wild, way-out interior full of ideas for use in a model interior.

DETAILING YOUR INTERIOR FOR THOSE EXTRA POINTS

By Bob Wagner

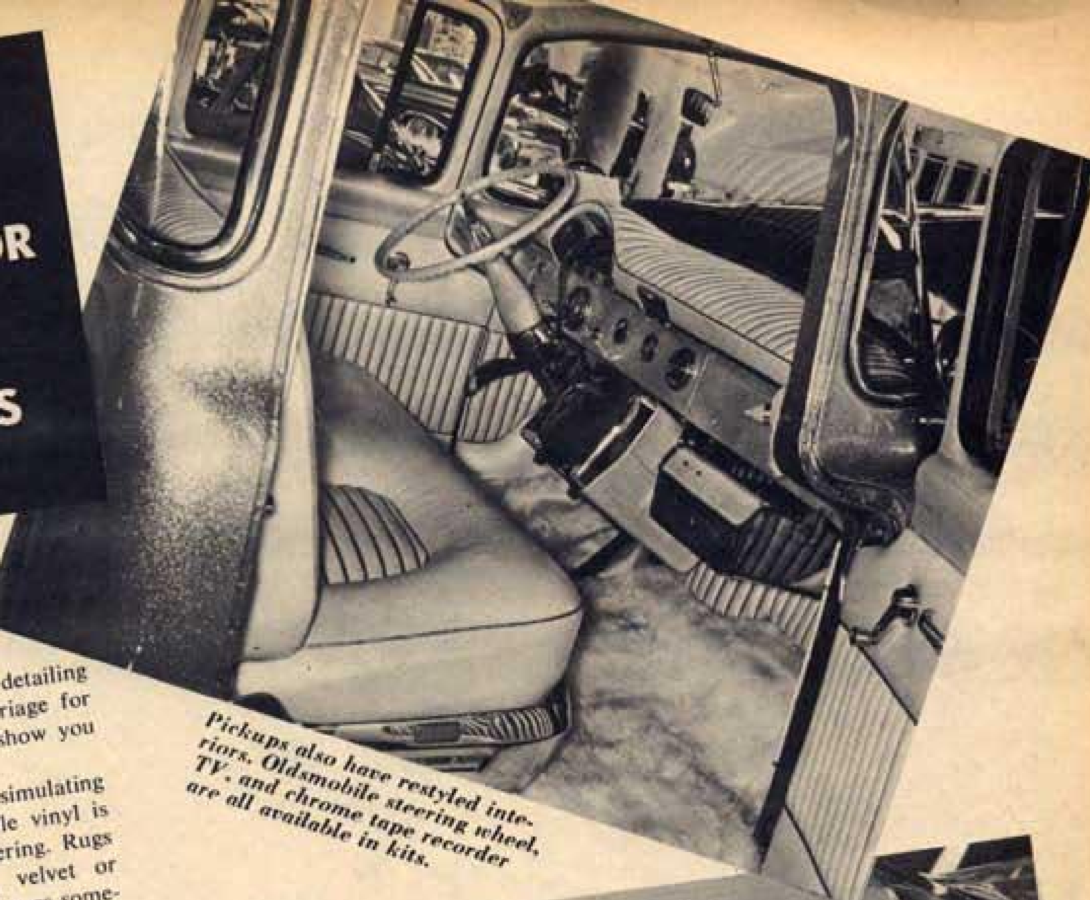
Last time we talked about detailing your engine and your undercarriage for extra points, this time we will show you how to detail your interior.

Corduroy can be used for simulating pleat and roll upholstery, while vinyl is employed for flat leather covering. Rugs can be made of corduroy, velvet or fluffy velvet to simulate furry rugs sometimes used in the real cars. Many of the new kits have fantastic looking bucket seats; these can either be upholstered or painted a flat color to simulate upholstery.

Dashes can also be swapped to change the appearance. If the dash you wish to use does not fit exactly, the extra space can be filled with scrap sheet plastic or putty. Extra gauges should be installed if your model is a rod or other high-performance car.

Pedals can be taken from almost any AMT or Revell kit. If your rod is a "T," it can be made more authentic by mounting a floor hand emergency brake in the car. This can be constructed from the one in the AMT "T" kit or a chrome one can be made from a Revell motorcycle handlebar.

Swivel bucket seats can be made by using the buckets from any kit and a



Pickups also have restyled interiors. Oldsmobile steering wheel, TV, and chrome tape recorder are all available in kits.



Complete custom interior utilizing custom-built buckets, and a hand-built floating console.



Roadster interior with custom made buckets, instrument filled dash, Impala steering wheel, a chrome emergency brake is also visible.

small snap. The part of the snap with the knob is glued to the floor and the part with the hole is glued to the bottom of the seat, these are then set aside to dry thoroughly. When dry, seat is snapped to the floor and now swivels. It is sometimes helpful to put a lubricant on the snap before joining, this can be a small dab of vaseline or a drop of other suitable lubricant. This lubricant makes the seat swivel a little more freely.

Such things as a lighted TV or a tape recorder with tape add interest to your car, and points from the judges. A lighted TV can be made by taking the TV out of any of the numerous kits and cutting out the screen. A suitable picture from a viewmaster reel is selected and is glued into place through the back of the set. Then a grain of wheat light is mounted behind the picture and the wires run out the bottom of the car so when a battery is hooked to the light the TV appears to be on. A tape recorder with tape can be detailed by taking one of the recorders included in many of the kits. Take your razor saw and cut a notch in the tape deck. Get a small piece of recorder tape and cut a very thin strip, glue it around the one tape reel, run it through the slit to the other tape reel, around it and glue it in place.

Steering wheels, steering columns and foot pedals from other kits can be interchanged to give that custom look.

Thin chrome tape can be used to decorate your interior. It comes in widths from 1/64 to 1/2 inch.

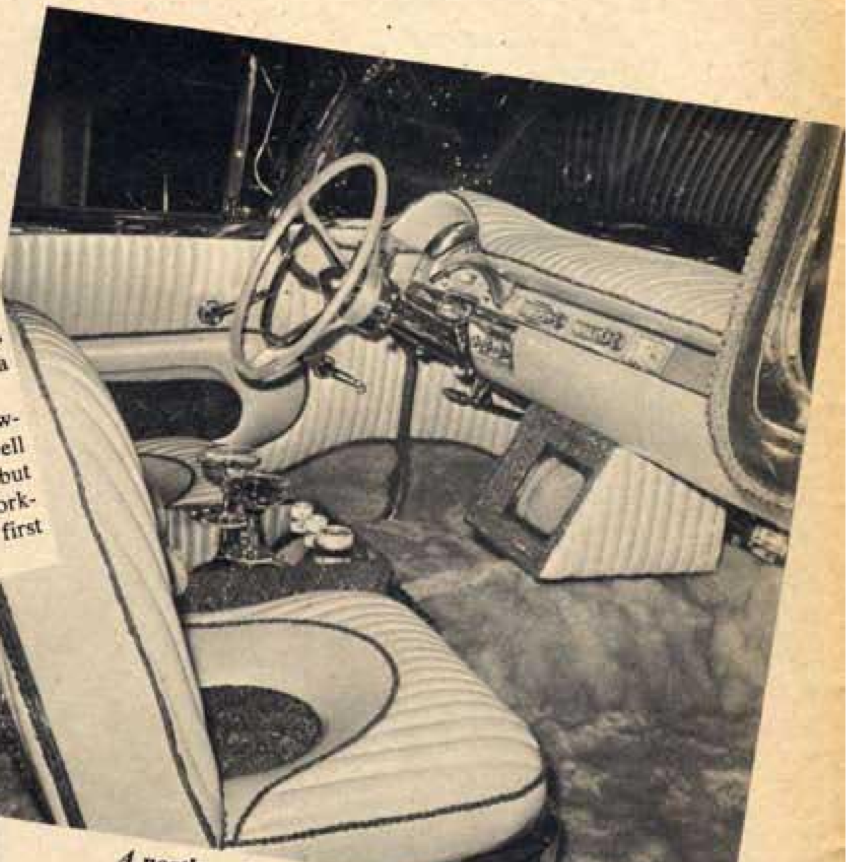
Seat belts, fire extinguishers, roll bars and other safety features help add points in the safety column.

To tint your bubble or windshields use an enamel candy glaze and spray a couple of light coats.

If the foregoing suggestions are followed, chances are that your model is well on its way to being a prize winner, but never forget that basic axiom: If workmanship and craftsmanship come first . . . .The trophies will follow.



Stewart Warner instruments fill roadster dash while stock wood "T" steering wheel is retained.



A neatly upholstered TV under dash, fluffy carpet, and telephone give modelers ideas for restyling interiors.



Wild furry interior done on this pickup, features chrome phonograph, microphone, custom built console with instruments. Seats are custom hand built.

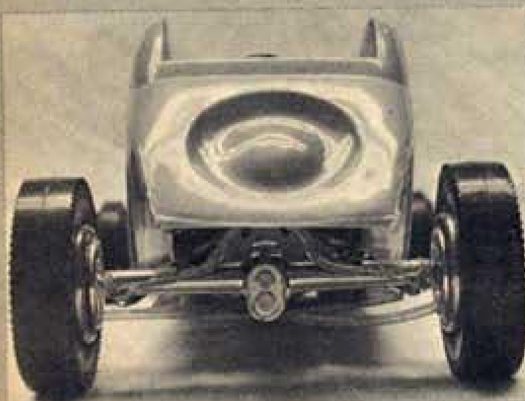


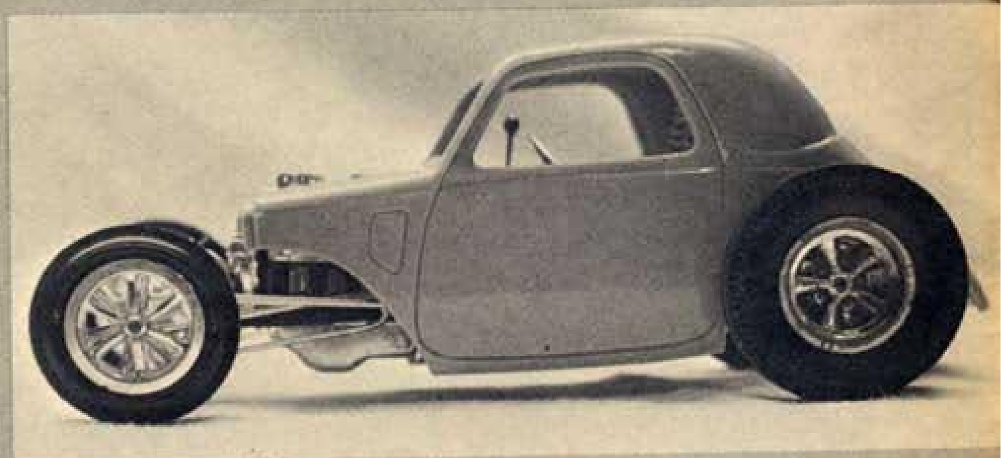


Ultimate in interiors, removal of all usual items found in the interior of an automobile. All mechanical operations are done electronically by pushbutton control.

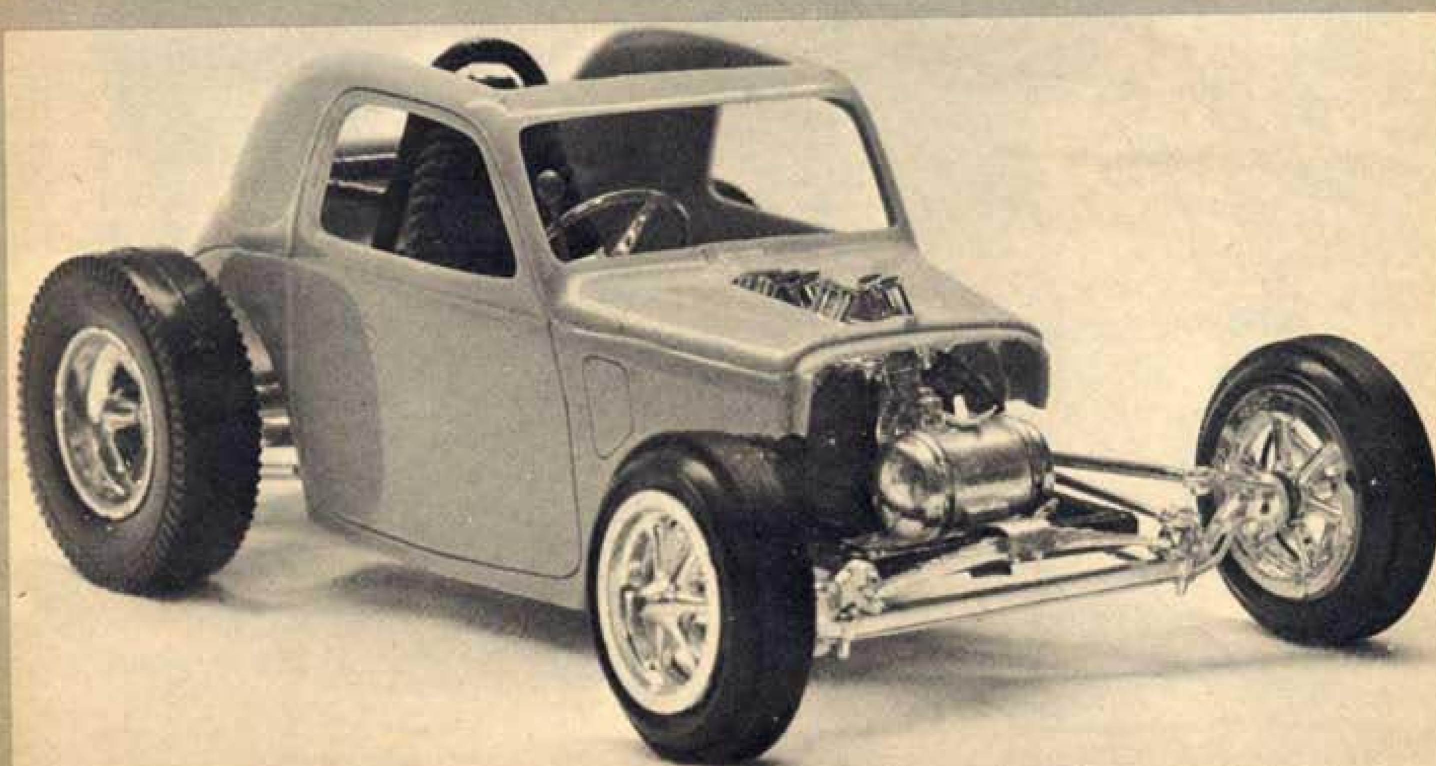
Even a drag machine can have a neat stylized interior.

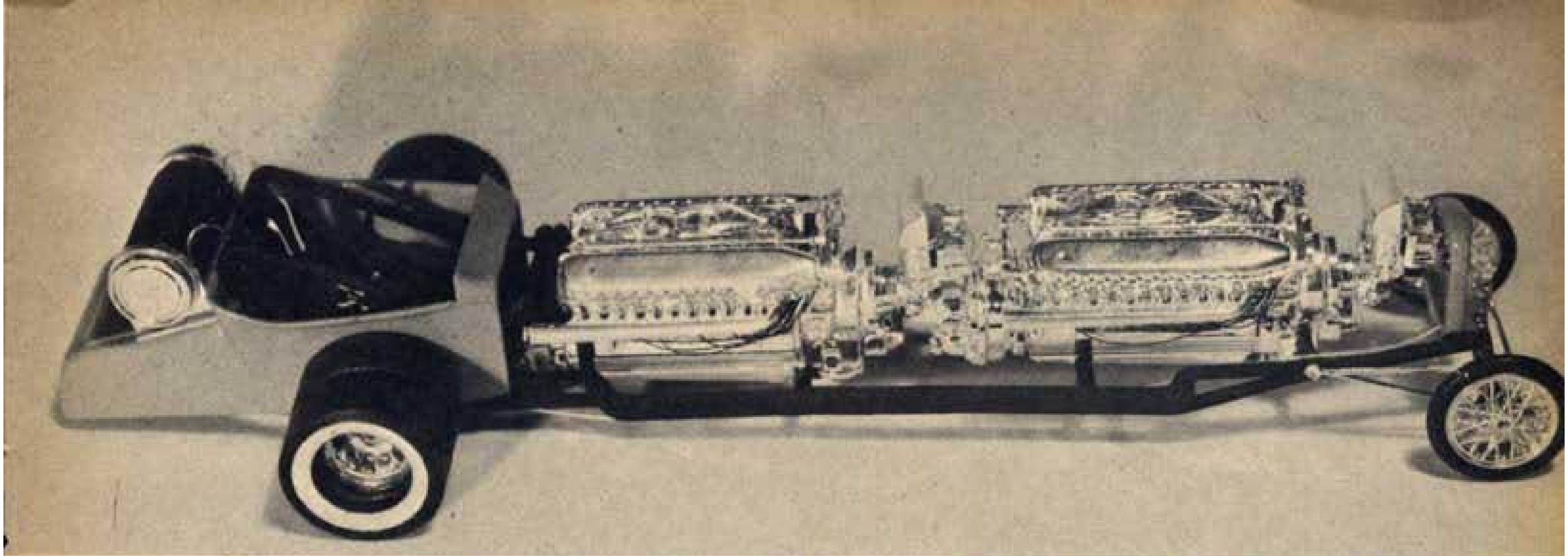
MCS CONTEST WINNERS





Photographers Mate 3, Don Anderson, U.S. Navy, takes first place with this Fiat coupe built from scrap parts mostly and Revell Custom Kit parts. Mill is an A.M.T. Dodge from "Ala Kart."





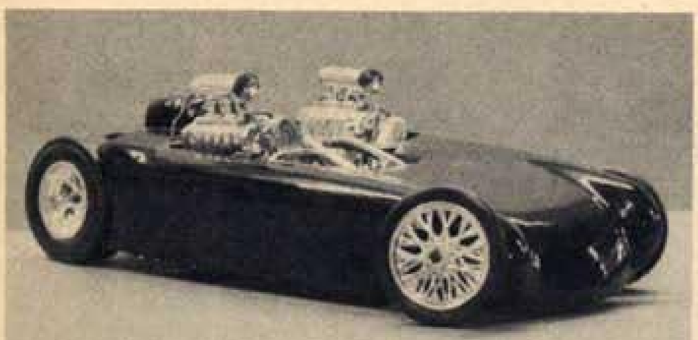
RUSTY BRIZENDINE FROM ROSEBURG, OREGON, CREATED THIS ORANGE TWIN ENGINE ALLISON DRAGSTER.

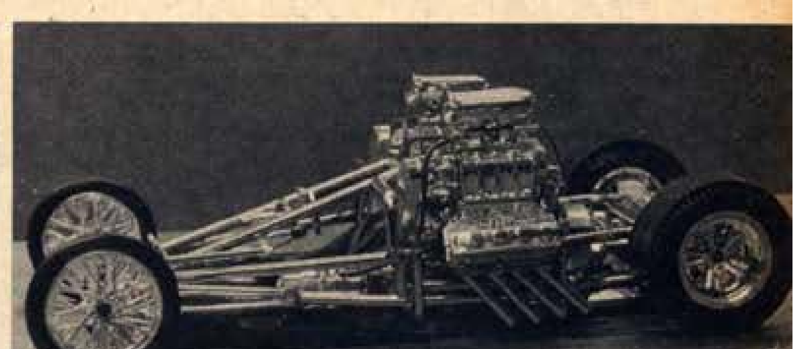


The "Burgundy Bucket" was a club project of Phil Justice, Ed Kelly and Teddy Kelly, from Pikeville, Kentucky. Car is a '32 Ford with reworked top, custom interior, '57 Buick mill.



Glen Mueller from Oshkosh, Wisconsin, used the mill from a '57 T-bird with the carb set-up from a '32 Victoria kit, all chromed and wired, in his '30 Ford Phaeton from Monogram.





Three First in Class and three Best in Show Awards have been taken by "The Beast" built by Bob Ball from Winnipeg, Manitoba, Canada. Made out of scrap molded and smoothed inside and out, scratchbuilt body is removable. Car also features leaf-type suspension, working steering, hydraulically actuated clutch and hydraulic throttle linkage.

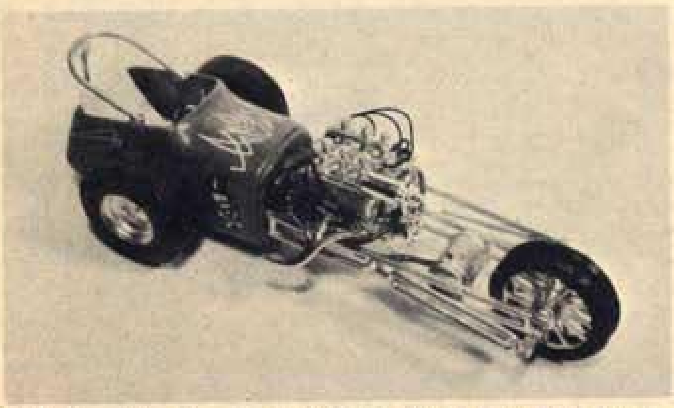




This double entry was built by 22 year old Don Culp from Blytheville, Ark. "El Pronto" pick-up features operating headlights, opening doors, wired mill and custom upholstery. "Voo-Doo" (shown at right) was sectioned six scale inches. A Revell blown Pontiac engine is completely wired, and lake pipes are Revell's '63 Valiant.



Kankakee, Illinois modeler, Bill Orban started with a '62 Pontiac and added working head and taillights, hinged doors, a sunliner roof, and a fully wired 421 cubic inch Pontiac engine. Interior is fully upholstered with blue and white corduroy to coordinate with the metallic blue exterior.



Built from the Monogram Dragster kit by Gary Lee, from Stockton, California, this rail has a Revell Cadillac V-8 fully wired. Body is fire engine red with white pinstriping.



Here's a real show/go Ford coupe complete with many labors of love. Unique paint job was created by Wes Jones, 6523 Dana St., Springfield, Va.



Powered by a 421 Pontiac, blown and injected, completely wired including a real rubber belt driven blower, and individual headers, this '41 Willys coupe was built in 1½ months by Bob Anderson from Ocala, Fla. Body is painted with 14 coats of hand-rubbed Wild Cherry Candy Apple plus 4 coats of clear lacquer.





Starting with an A.M.T. '61 Buick, Wayne King, age 18, shortened and re-shaped the rear end. Fender skirts from AMT's '60 Edsel kit provided the scoops which flow backwards into the taillights. A completely wired, blown Buick mill provides the go power. Tape recorder, TV, and telephone are among the goodies included in the interior.



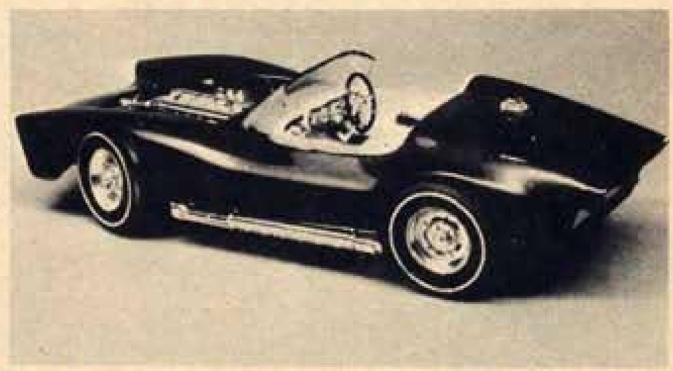
Built strictly from scrap parts by Lon Bunting, from West Branch, Michigan, this Model A has a Chrysler slant six engine with three carbs. New radiator, baggage carrier and nerf bars were added.



This completely restyled '57 Ford Fairlane, by Jack Jandreau from Thornton, Colo., has workable steering, opening doors, swivel seats, a fully wired 352 cu. in. V-8, and detailed undercarriage.



Steve Atwell from St. Charles, Missouri, completely upholstered the interior and trunk, added a 421 blown Pontiac engine, a '60 El Camino grille and scavenger pipes of brass tubing on this '49 Merc.



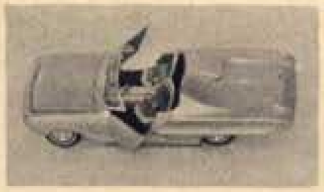
From Edmonton, Alberta, Canada, comes this G.T.O. built by Wally Orlecki. Body was made from a D-Jag with Riviera grille, '61 T-bird quads, E-Jag roof for rear deck. Power is Mercedes V-12.

a MODEL CAR SCIENCE *Contest*

FOR MODELERS EVERYWHERE . . .

Each month the editors of MCS will select, from black and white photos submitted, the top model car. It will be shown on these pages and its owner will receive a beautifully engraved trophy.

SEND A PHOTO OF YOUR PRIZE MODEL TODAY TO:



MODEL CAR SCIENCE
Contest Editor
171 So. Barrington Pl.
Los Angeles 49, Calif.

You may submit as many entries as you wish. Send photos only, please. NO KITS. Include your name, address, age and information on how you built the model. Only CAR models are eligible. We cannot return any photos submitted.



Opening doors, crank-operated windows, steerable front wheels, operating independent front suspension with coil springs and a fully detailed engine, all on the soon to be released XKE.

FIRST REPORTS

MONOGRAM

Seven new car kits, ranging from way-out to modern classic, have just been announced by Monogram Models. They're all great, but hang on to your hat when you check out the Jaguar XK-E Sport Coupe in 1/8th scale. This $10.98 kit features operating doors with crank-operating windows, steerable front wheels, operating independent front suspension with coil springs and hood that opens to show fully detailed engine. The Jag has a 12-inch wheelbase and is 21-3/4 inches long. There are 267 parts, of which 57 are chrome-plated.

Car kits to be introduced with the XK-E include the Li'l Coffin, winner of numerous top custom car show titles in full size, and known for its elongated body and cantilevered roof with only rear supports. Another way-out car to be offered is the Predicta, a half-inch scale model of Darryl Starbird's prize-winning "personal car of the future." Starbird recently sold the car to Monogram after retiring it from competition. Features include a double bubble-top, a "Unistick" steering lever and reclining bucket seats.

Monogram's Big "T", first in the big line, was introduced in a new form — the Little "T" in half-inch scale. This kit is an exact copy of its bigger brother and of the real Big "T", built for Monogram by Starbird.

Other car kits in half-inch scale are a 1929 customized Ford pick-up, the Blue Beetle, a car popular with the California skin-diving and surf-boarding crowd; a 1940 Ford pick-up that can be assembled in one of several custom variations, and a 1958 Thunderbird with a variety of customizing optional features.

REVELL



These two Tony Nancy cars will soon be offered by Revell in one kit for $2.00.

BIG NEWS in CAR KITS

Several great new items are now on their way to hobby dealers from Revell. A unique full color pop-up custom garage workshop setting for model cars, and an exciting display setting of a typical drag strip head the list. The three dimensional garage workshop needs only the builder's "finishing touch" to permit varying shop scenes in 1/25th scale. Also in 1/25th scale, the drag strip is designed to permit use of two or more units for expanded setting.

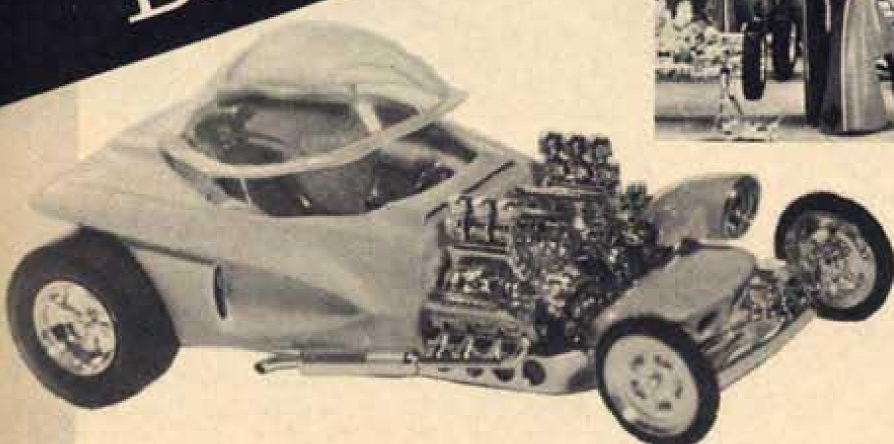
Headlining the car kits just released by Revell are the '22 Jr roadster and dragster. The dragster features a removable body shell, American Mag wheels, and has a Tommy Ivo chassis, plus a Plymouth 426 super stock V-8 engine. The '22 Jr roadster has a '23 "T" Cal Automotive body, Halibrand Mag wheels, Kent Fuller chassis, and a miniature Tony Nancy drag chute pack, along with a blown Buick V-8 engine.

Adding to the Revell series of Ed "Big Daddy" Roth show cars in 1/25th scale, the fantastic Mysterion has been reproduced right down to its twin Ford 406 engines and the hinged bubble top. Mysterion retails for $2.00.

For the slot racers, two new 1/32 scale body kits will soon be available in the form of Carroll Shelby's Cobra Ford and the Ferrari 250 GTO. These new $1.00 body kits feature clear plastic windows and headlights, many chrome parts, metallized wheel inserts, driver, roll bar, plus special pressure sensitive racing numbers. The Cobra Ford also has an optional hardtop.



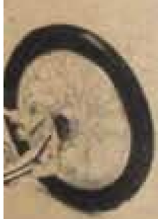
This well equipped Venice garage will soon be for sale. Price: $2.00.



Another Ed "Big Daddy" Roth show car, Mysterion will be added to the Revell 1/25 scale fleet.



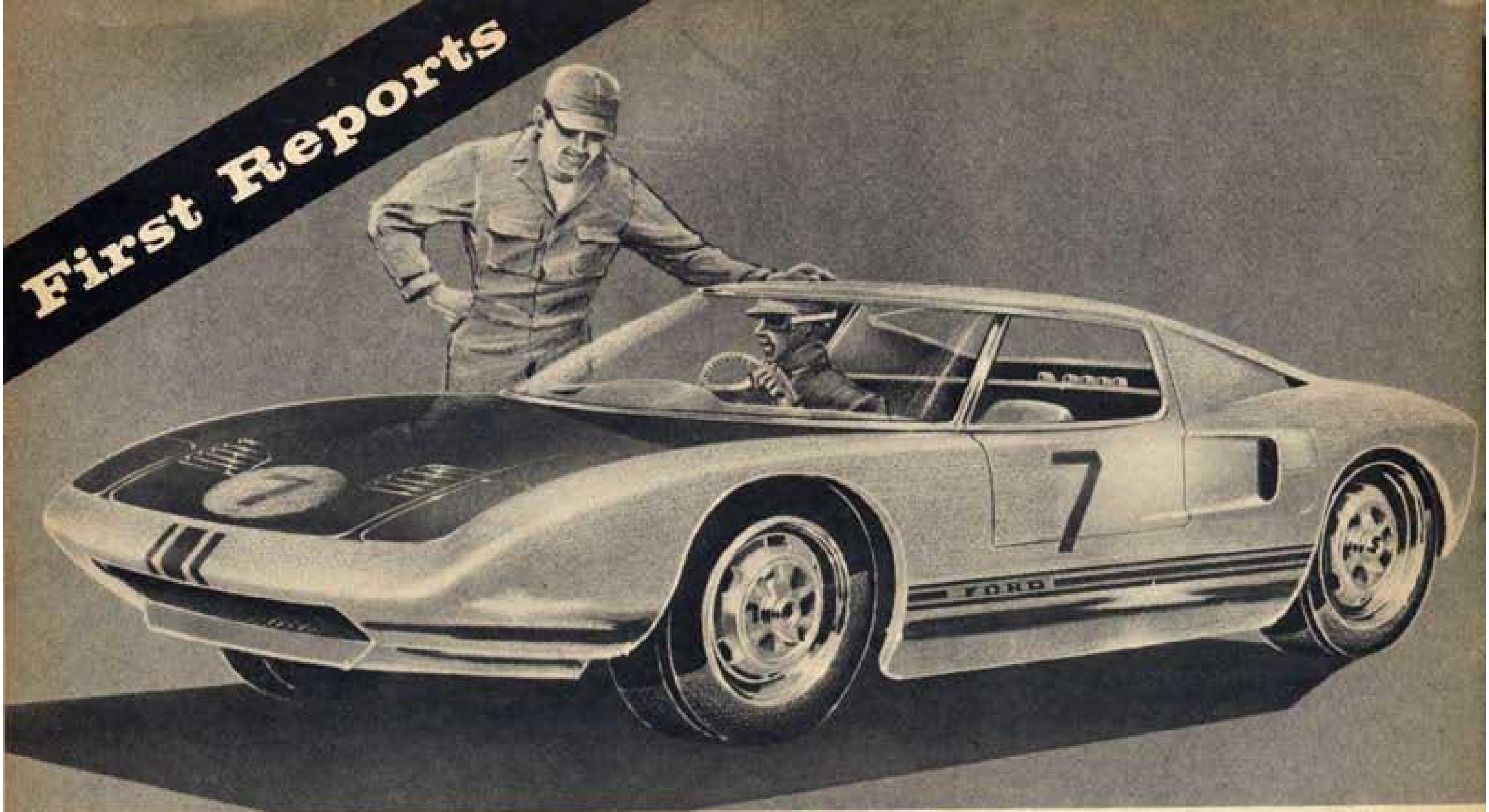
For the "slotting set" the Ferrari 250 GTO body in 1/32nd scale will sell for $1.00





Carroll Shelby's Cobra Ford body will be available with an optional hardtop.

First Reports



SOON TO BE AVAILABLE IN 1/32nd SCALE IS THE FORD-ENGINED GT CAR.

Strombecker

Several new surprises are in store for hobbyists from Strombecker during the next few months. Leading off the parade of new developments is a complete, new line of hobby tools including a hobby knife, power drill, oiler, utility knife, file set, screwdriver set, criss cross tweezers, keyhole saw, needle nose pliers razor saw, diagonal cutters and a tool kit with an ideal assortment of tools for car customizing and model building.



Newest addition to the Stromberg line of tools is this cordless, battery-powered hand drill.

THIS 1/24TH SCALE LOTUS-FORD FEATURES MANY AUTHENTIC DETAILS.



The cordless hand drill operates on 2 "C"-type dry cell batteries and is made of high-impact plastic. Special features include a flush-mounted on/off switch, a steel chuck, and four interchangeable bits: a drill bit, a router, a de-burring tool, and a standing drum . . . all for $3.95.

In the slot racing department, the famous Lotus-Ford and the 200 m.p.h. Ford GT – are the newest scale models to be released by Strombecker.

The Lotus-Ford is a 1/24th scale replica of the Anglo-American Grand Prix car that stunned the U.S. racing world by finishing 2nd in the Indianapolis 500 last year. The Lotus-Ford has already been made a prohibitive favorite for this year's 500 and it is expected that Jim Clark, world's Grand Prix champion, will again be at the wheel. The racer features complete suspension components, finely-worked exhaust system, and other intricate and authentic details.

The Ford GT, announced only a few weeks ago by Ford Motor Co., as their 1964 "Ferrari-eater," is a derivation of the famous Ford-engined GT car that ran at LeMans last year. The 1/32 scale model will be available to the public at about the same time that the full-size Ford GT starts winning in international competition. This model will be a closed, fast-back GT coupe that will race in the same class as the Strombecker Ferrari Berlinetta and Jaguar XKE.

HUBLEY

HUBLEY

LOVE OLD CARS AND LIKE TO BUILD SUPER-DETAILED KITS? THEN HERE'S A BEAUTIFUL SIGHT TO SEE! THE HUBLEY MFG. CO., WILL SOON OFFER A DOUBLE TREAT IN THE FORM OF A FOOT LONG METAL DUESENBERG KIT AND THE 1930 PACKARD CONVERTIBLE VICTORIA ▪ ACCURATELY SCALED TO 1/18 INCH, THE DUESENBERG'S BODY AND FRAME ARE DURABLE DIE CAST METAL ▪ THE ENGINE HAS THIRTY-FOUR PARTS, AND IS SCALED TO THE LAST NUT AND BOLT ▪ SIDE EXHAUSTS ARE AS FLEXIBLE AS THE REAL THING ▪ OTHER DETAILS INCLUDE MOVABLE REAR SEAT COWL AND WINDSHIELD, WORM AND SECTOR STEERING, TOP-DOWN BOOT, AND LOADS OF OTHER METALIZED PIECES ▪ THE PACKARD MODEL IS 9½ INCHES LONG, WITH A REMOVABLE HOOD TO SHOW THE SUPER-DETAILED STRAIGHT EIGHT ENGINE ▪ THIS CAR HAS OVER 140 PARTS OF DIE CAST METAL, PLASTIC AND METALIZED PLASTIC ▪ SUGGESTED RETAIL PRICE IS $4.98 ▪ HUBLEY IS ALSO INTRODUCING AN ENTIRELY NEW CONCEPT IN DRAG RACING IN THE FORM OF A NON-ELECTRIC, INSTANT TORQUE MOTOR THAT WILL POWER A CAR ANYWHERE A SMOOTH ROAD BED IS AVAILABLE ▪ TWO DIFFERENT BODY DESIGNS WILL BE OFFERED WITH THIS MOTOR, A COMPETITION COUPE AND AN ALTERED FIAT COUPE HAVE BEEN SCALED DOWN FROM EXISTING HOT COMPETITION RACERS OF DIFFERENT DRAGSTER CLASSES ▪ THESE CARS CAN BE RUN ON A WIRE OR CONVENTIONAL STRAIGHT SLOT TRACK ▪ BOTH DRAGSTERS ARE IN 1/25TH SCALE.

This 1930 Packard convertible Victoria has over 140 parts of die cast metal and plastic.



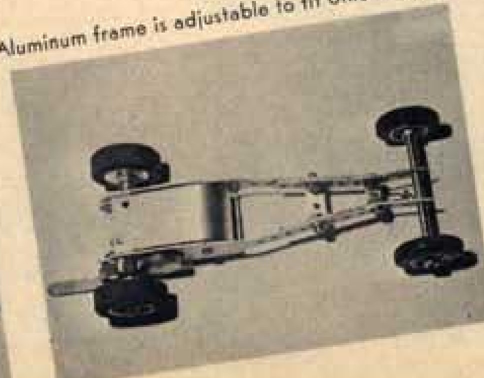
"King of the Classics," the Model SJ Duesenberg Dual Cowl Phaeton, is in the limelight again. This new Hubley model is 12½ inches long.



Altered Fiat Coupe is 1/25 competition scale.



Aluminum frame is adjustable to fit other bodies.



Competition coupe runs on a wire or slot track.



GREAT CUSTOMS ...AND HOW TO

French Riviera

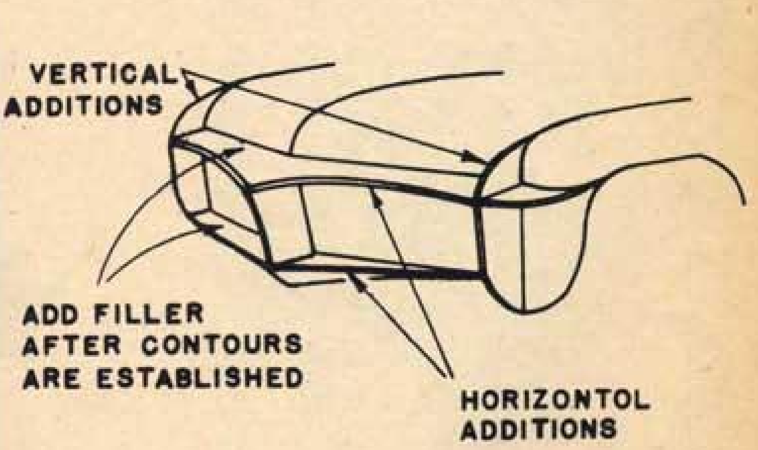


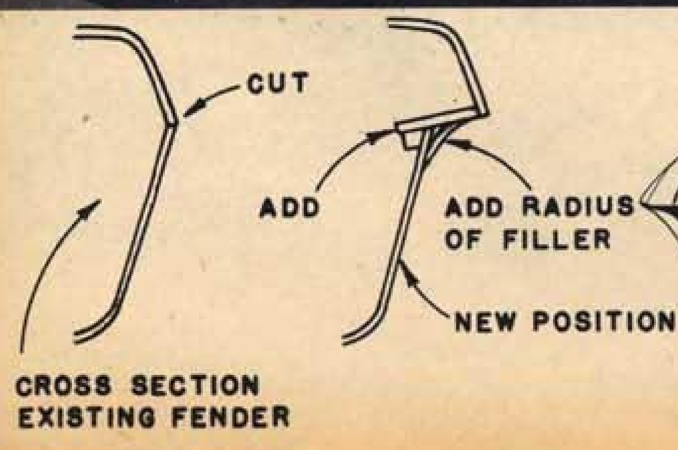
The '64 Buick Riviera by AMT, some scrap sheet stock, a lot of time, and careful planning, is the basis for this great custom. Start this project at the front by leaving off all chrome. Form extended peaks from sheet stock. Glue on edge to existing front after trimming excess below top of parking light opening. Use three vertical pieces at center, and at peak of both fenders. Now fit two horizontal parts between fender uprights, when dry, shape extended edges as shown in photos. Now use scrap plastic and filler to blend into existing body contours and form radiuses at grille openings.

At the rear, establish peak lines aft of wheel opening. Cut lower section of fenders off at this line. Move inboard approximately the width of a tire and re-install. Use scrap plastic as a bridge to fill gap that will exist.

Cover card stock with aluminum foil for splash guards behind rear wheels. Section rear bumper to fit new narrow fender

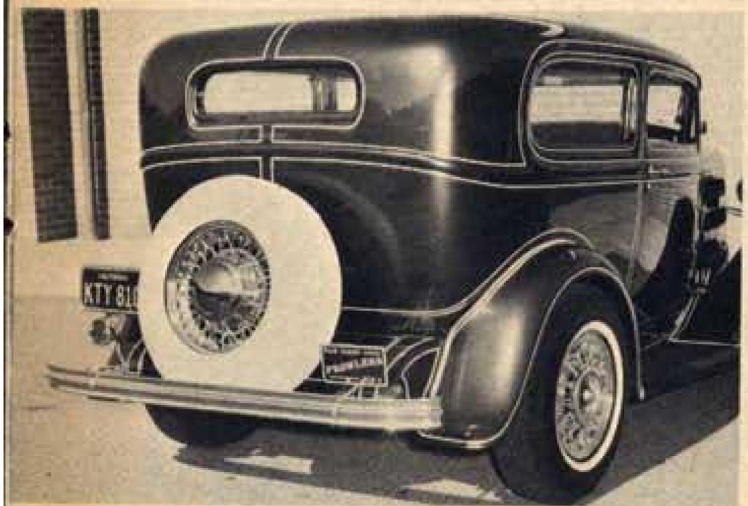








and HOT RODS
BUILD THE MODELS



PROWL CAR

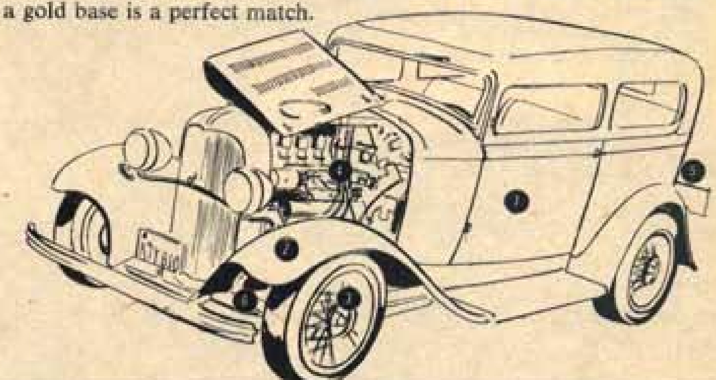
Dave Hayward of the San Diego, California Prowlers, spent six years building his '32 chopped sedan. This Deuce is chopped a total of six inches, and this just happens to be the same amount Revell's Orange Crate is chopped.

Rear molded fenders will have to be cut from the Orange Crate, full fenders from either the AMT '32 Victoria, or '32 coupe are substituted.

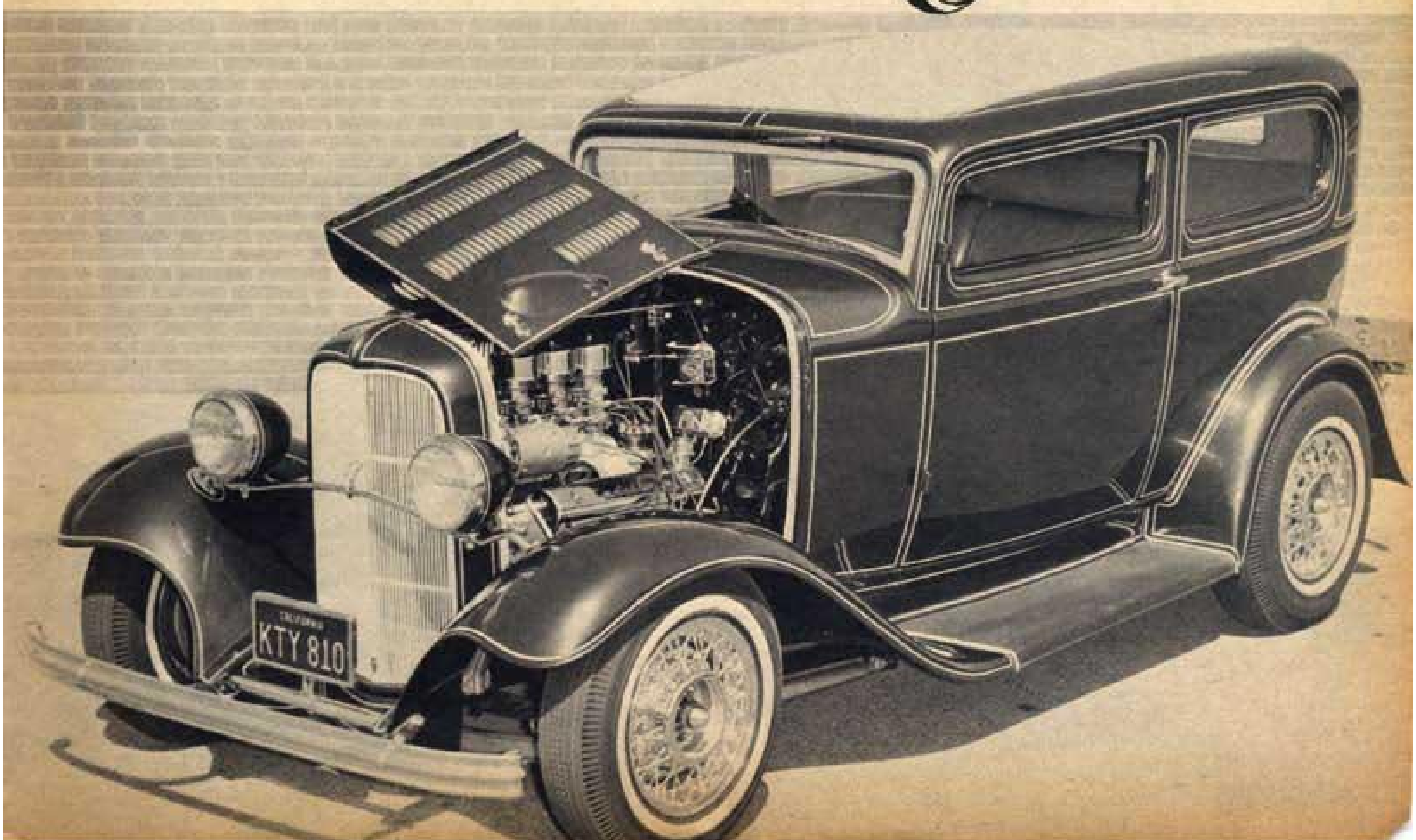
Suspension and frame should be from the AMT '32 Victoria kit.

To do the outline striping, use the thin decorating tape. It comes in widths from 1/64 inch on up, 1/64 is best for this purpose. A good feature of this tape is that it will go around corners smoothly.

Color of car is Candy blue green. Pactra's Candy turquoise over a gold base is a perfect match.



1. Body-Revells Orange Crate
2. Fenders-AMT '32 Victoria or '32 Coupe.
3. Wheels-AMT '57 T-Bird
4. Engine-Revell's Cad engine kit
5. Spare tire and bracket-AMT '32 Victoria
6. Undercarriage and suspension-'32 Victoria or '32 Sedan from AMT



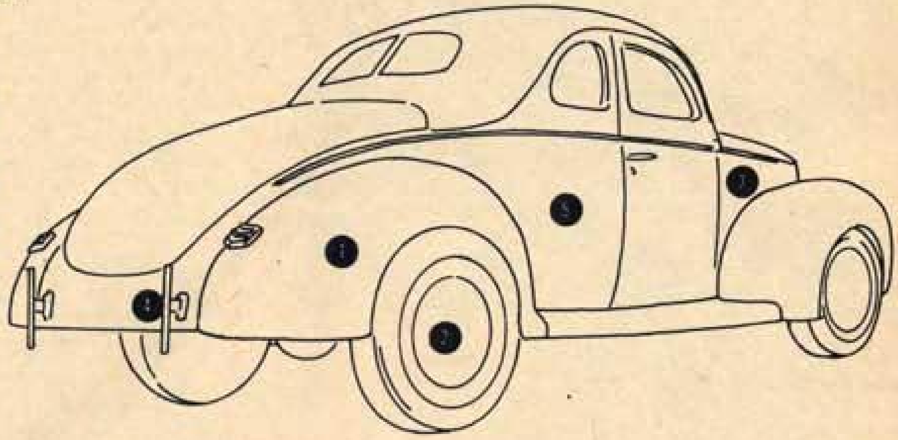
40 PLUS

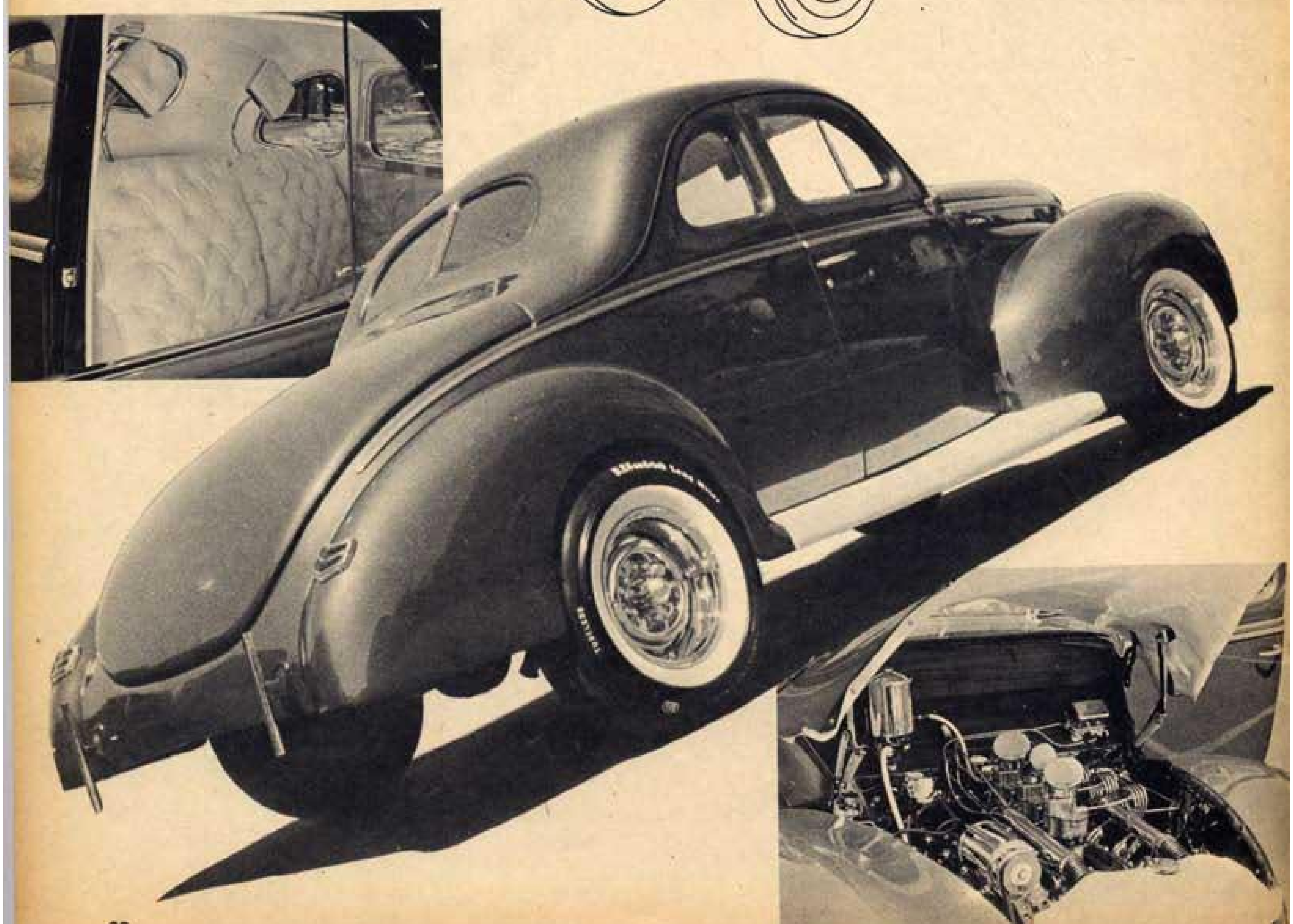
This '40 Ford has been nosed and decked, front and rear bumpers have been removed and nerf bars have been substituted in their place. Color is a bright red. Interior makes use of Corvair bucket seats done in a diamond tuft motif. Here, the builder will have to decide on his own type of upholstery, a reference to the article "New Interior Tips Worth Remembering" in the November issue of MCS might prove helpful.

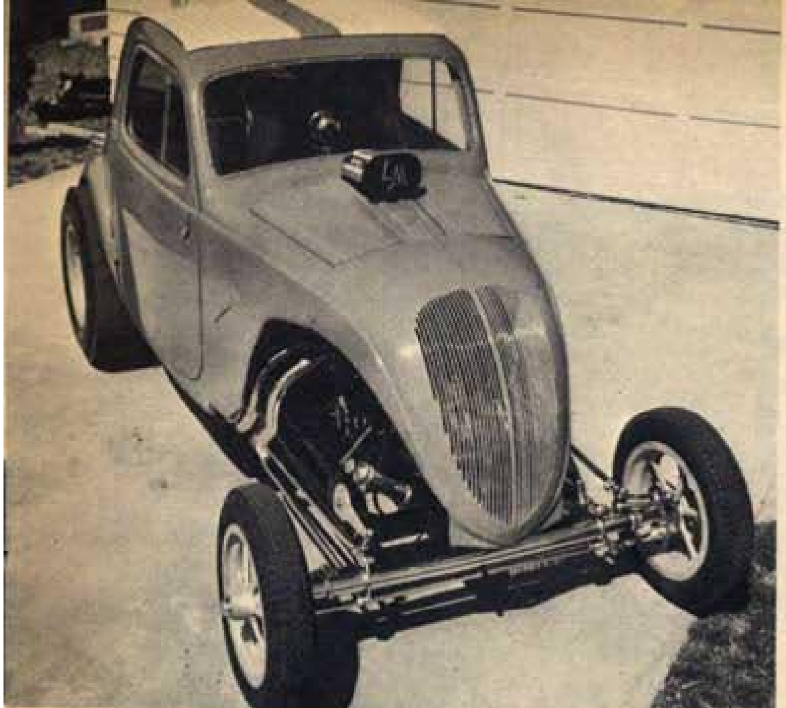
Engine is a flathead, this could be garnered from AMT's '49 Ford, '50 Ford, or '34 pickup. The three carb set-up will have to be built by the modeler. Using one of the two carb manifolds included in the above kits, take another manifold and cut it apart and add the mounting to the two pot manifold. The added piece will have to be flowed in so that it has the appearance of belonging to the manifold. The copper fuel lines to the carbs can be made from small copper wire.

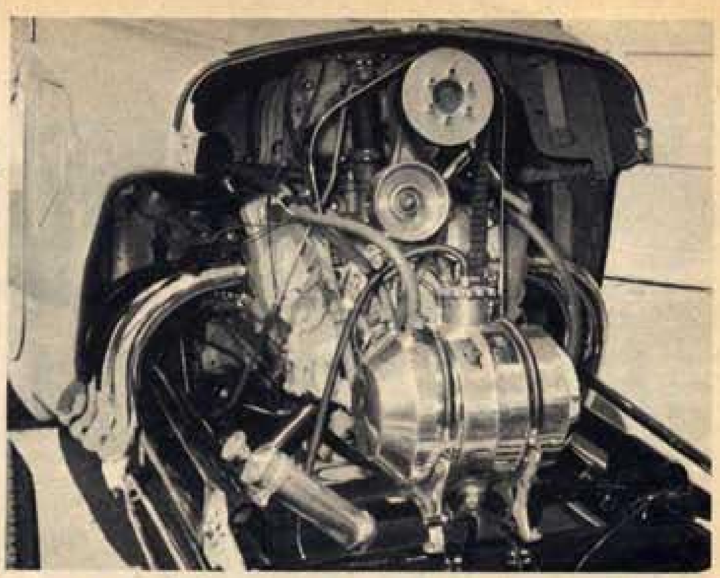
The running boards should be masked off and painted a flat white to simulate white rubber.

1. Body, frame, and main components—AMT '40 Ford kit.
2. Chrome wheels and tires—Revell Big and Little wheel kit.
3. Engine—AMT '40, '49, '50, or '34 Ford kits. (see article on making three carb manifold)
4. Nerf bars — made from pieces of chrome trees and inserted in bumper mounting bracket holes. (make four, two for front and two for rear)
5. Interior—buckets from AMT Corvair.

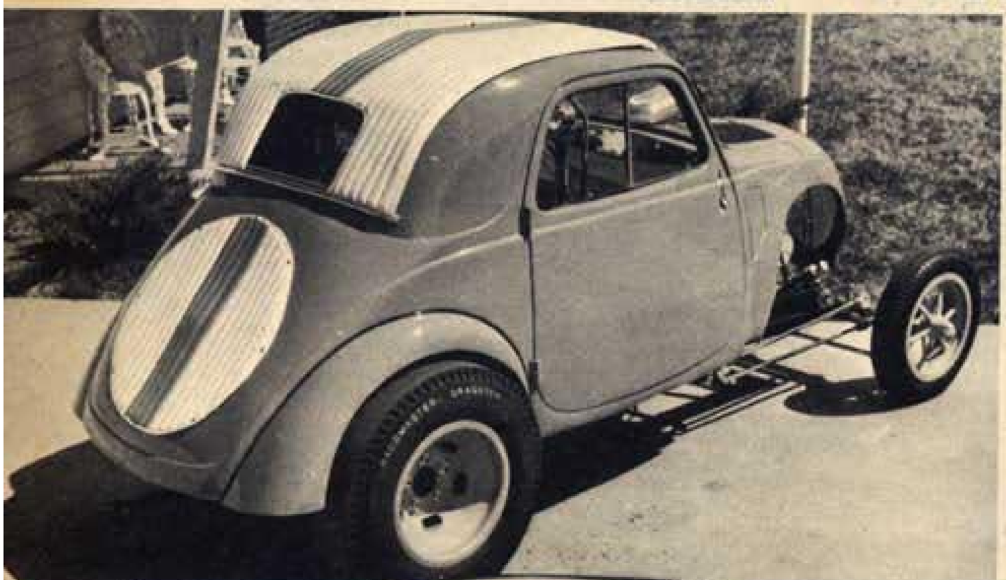








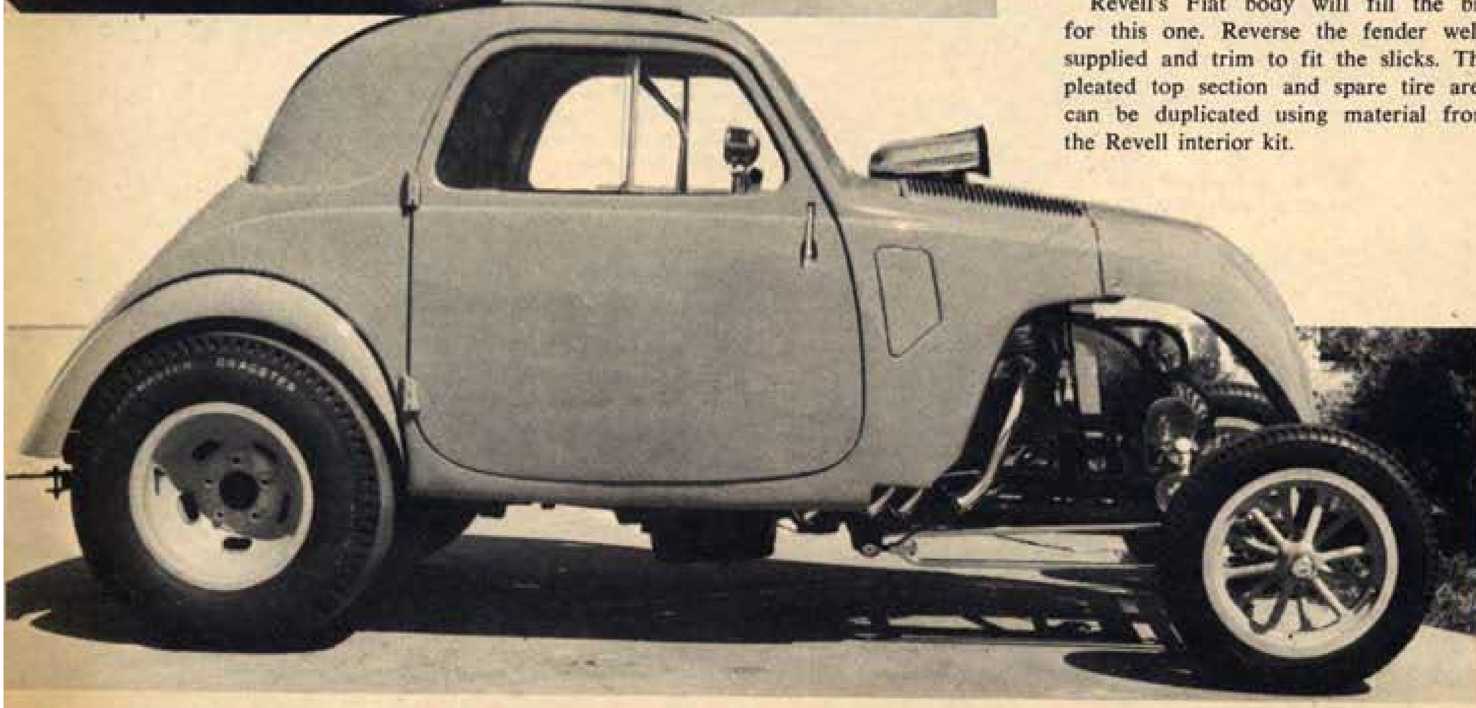
FLAT-OUT FIAT



Owned by Larry Moorehead of Kansas City, Mo., this Fiat bodied dragster has won best competition award in the K.C. Rod & Custom show. Workmanship and finish is excellent throughout and is covered with ten coats of tangerine lacquer.

Use the Revell Tubular Frame kit as a starter and add straight tube front axle and radius rods from the Dragster Speed Equipment kit #C1124. Wheels from AMT Hot Rod Shop and tires from Revell Competition Tires kit #C1143 can be used successfully. Power is supplied by a Chev engine, Revell Kit C1101, and a 4-71 G.M.C. blower from their Attempt kit couple this to a B&M Hydro from the Stone-Woods-Cook Willys and the chassis is complete.

Revell's Fiat body will fill the bill for this one. Reverse the fender wells supplied and trim to fit the slicks. The pleated top section and spare tire area can be duplicated using material from the Revell interior kit.



EXPERTS DON'T PLAY WITH CLAY

You can make professional quality models by following this simple, expert advice.

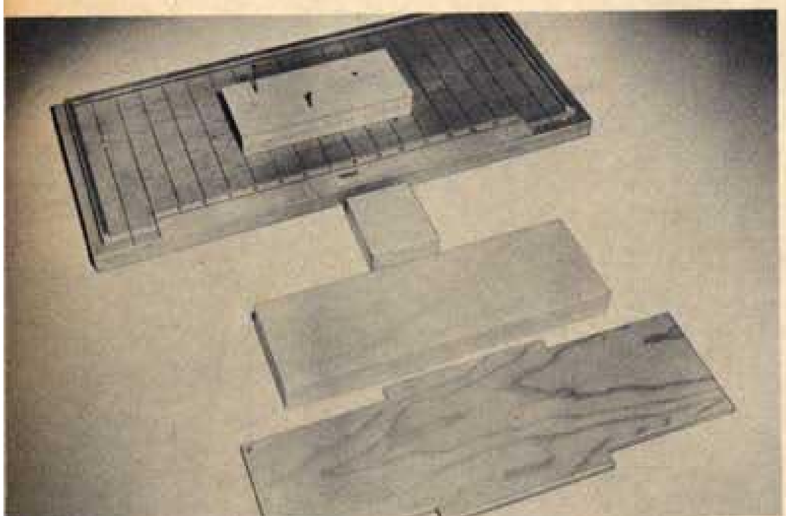
WITH THE CUT OFF date of June 5, 1964, drawing near, hobbyists motivated by the April issue of MCS to enter the giant Fisher Body Craftsman's Guild competition should be nearing the end of their design phase. To spark your imagination and suggest some advanced ideas for your model car, Model Car Science, this month, asked professional automotive designers at Fisher to assist you in getting started

After perfecting their drawings, professional designers transfer the designs into finished clay models. This gives them the opportunity to see the finished car in three dimension. It also offers the chance to change any areas that need improvement.

The Guild recommends that you follow the professionals' footsteps and prove your design in clay before building it of wood.

A clay model provides a form from which a complete set of templates, or station patterns, can be built for your wood model. Use a grease base modeling clay; not a water base or firing clay. If you cannot buy this type of clay in your locality, write to the Guild Technical Department for a supplier's address.

To reduce the amount of clay used, an armature, or wooden base, should be built. It vaguely resembles the shape of the car and should be made from scrap wood. About five pounds of clay are needed with a good armature.

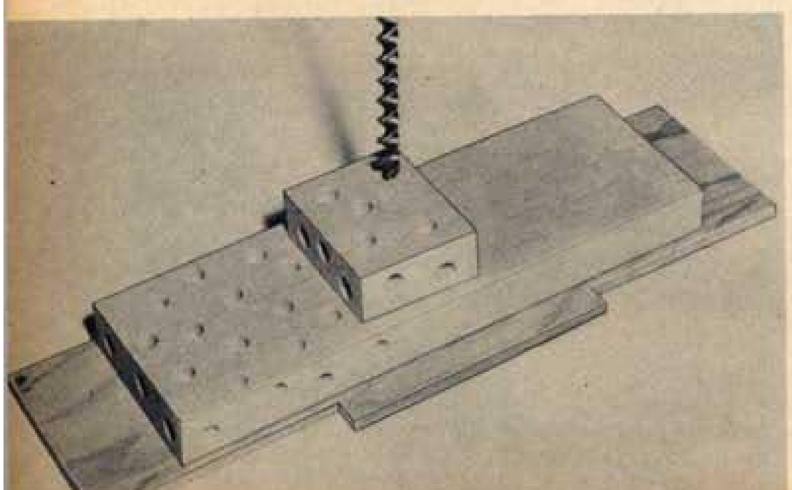


BUILDING AN ARMATURE

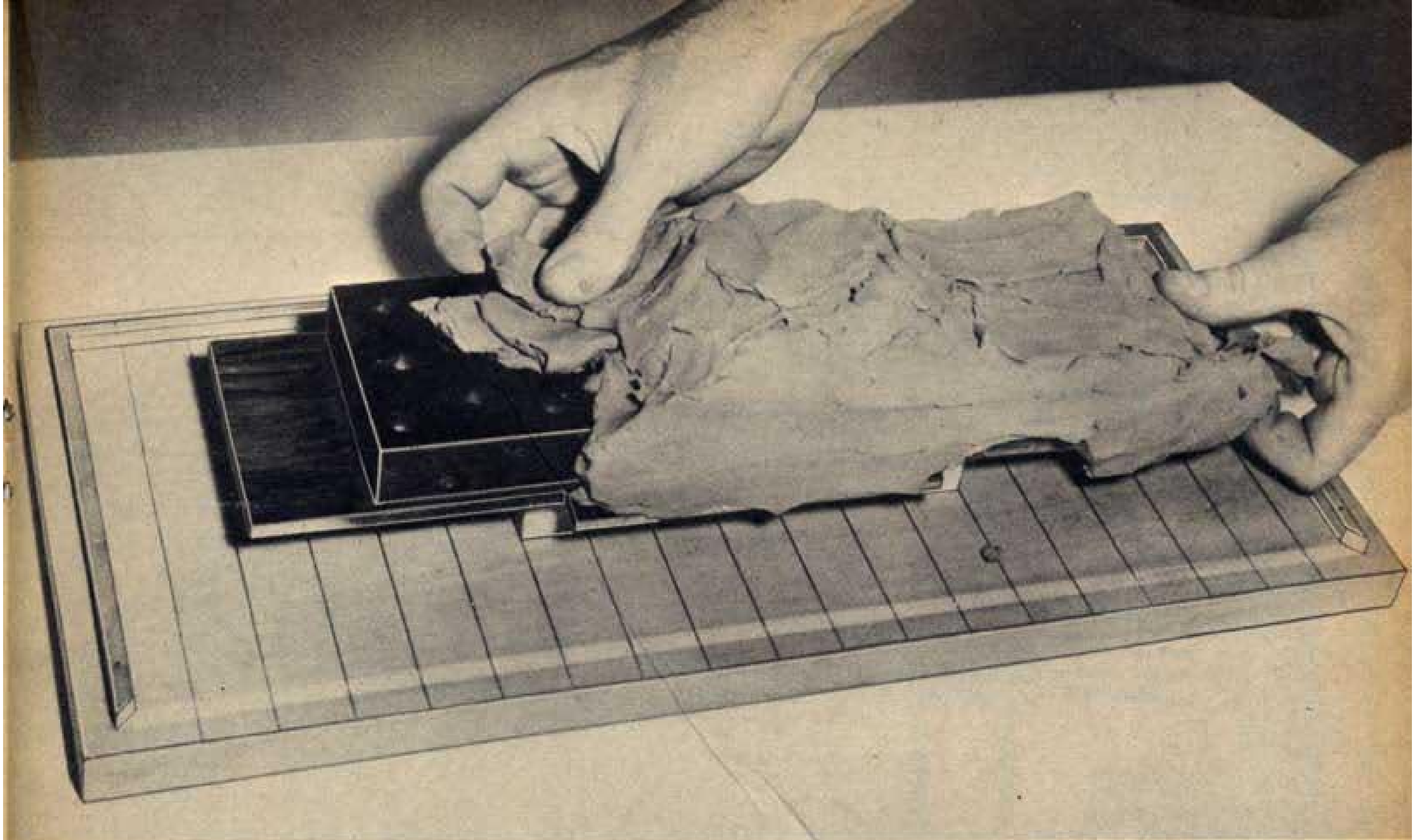
1. Ideally, you need five pieces of wood for the entire armature assembly, although it can be done with less. First, a three quarter inch board about 20" long and 10" wide is sufficient for a working platform. Draw parallel lines on the surface of the board 1" apart for template guide lines. Because the minimum distance from the ground to the car body is ½", nail a piece of wood one half inch thick about 7" long and 3" wide to the center of the platform.
With the baseboard complete, the armature can be made with the remaining three pieces of wood. One of these should be a ¼" piece of plywood, about 15" long and 5" wide. Instead of just notching out the wheel opening, extend each cut to the end of the board to simplify the operation. Next attach a piece of wood that measures approximately 12x3½x½ and on top of this add a small block of about 3x3x½.
To make the armature removable from the baseboard, align and drill identical holes in each, then affix two wooden dowels in the holes of the working platform.
If done properly, the armature will fit over the dowels, yet you can remove it from the platform when it becomes desirable.



2. The completed operation shows the armature resting on the dowels of the baseboard.



3. Insure that the clay will stay anchored securely to the wood by drilling ¼" holes about ¼" deep in all surfaces of the armature. It is not necessary to follow any drilling pattern, as these holes merely provide a footing for the clay mass. Use any fast drying lacquer or shellac to seal the wood. The sealing operation keeps the wood from absorbing the moisture in the clay before you are finished with it.

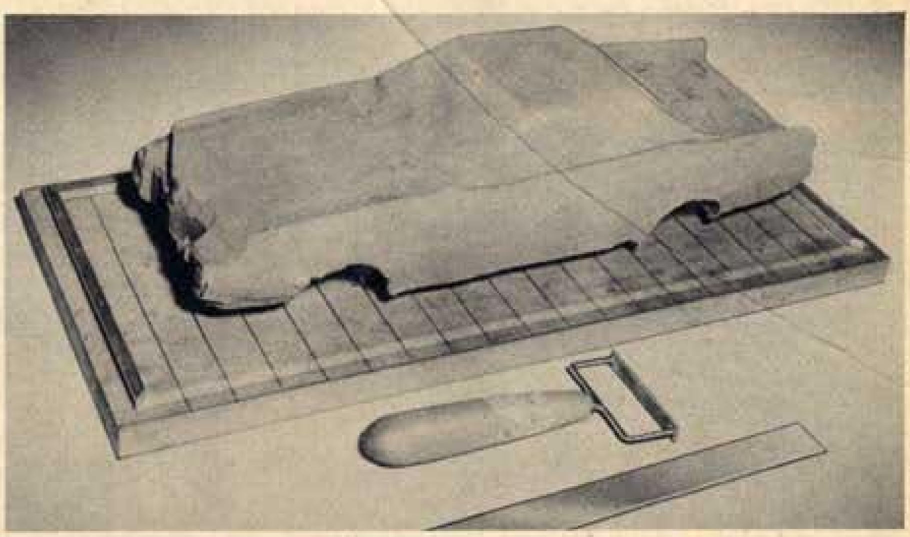


4. Apply the clay to the armature by hand and attempt to get the general shape of the car.

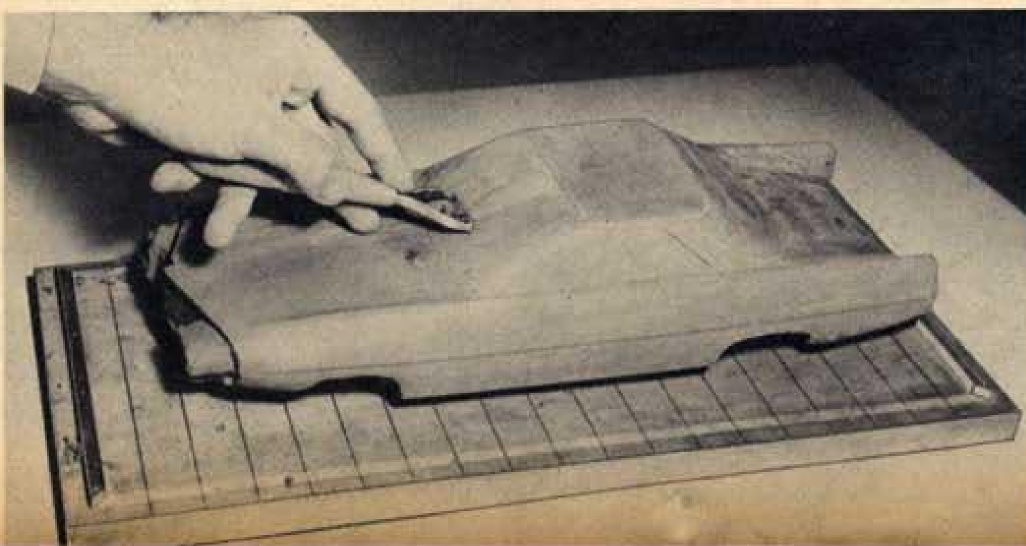
CLAY APPLICATION

The first rule to remember when working with clay is to follow the manufacturer's directions closely.

A small, semi-flexible metal ruler and mounted band saw blade will help you to rough in the car design. These items are shown to provide some idea of what tools should be used. The band saw blade was soldered onto a handle and makes a fine clay modeling implement. You now have to let the clay cool for about two hours. During this time, the clay will harden slightly. This enables you to sculpture the detail of your car into the clay.

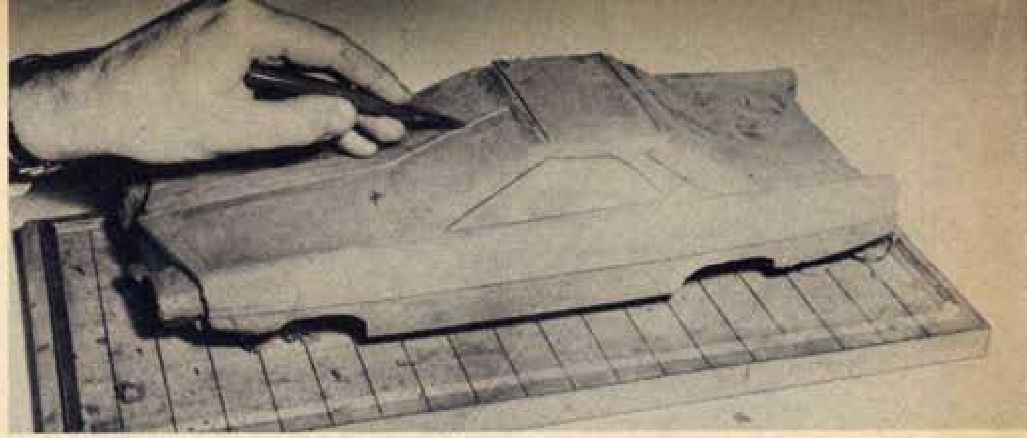


5. The roughed-in car should look something like this.

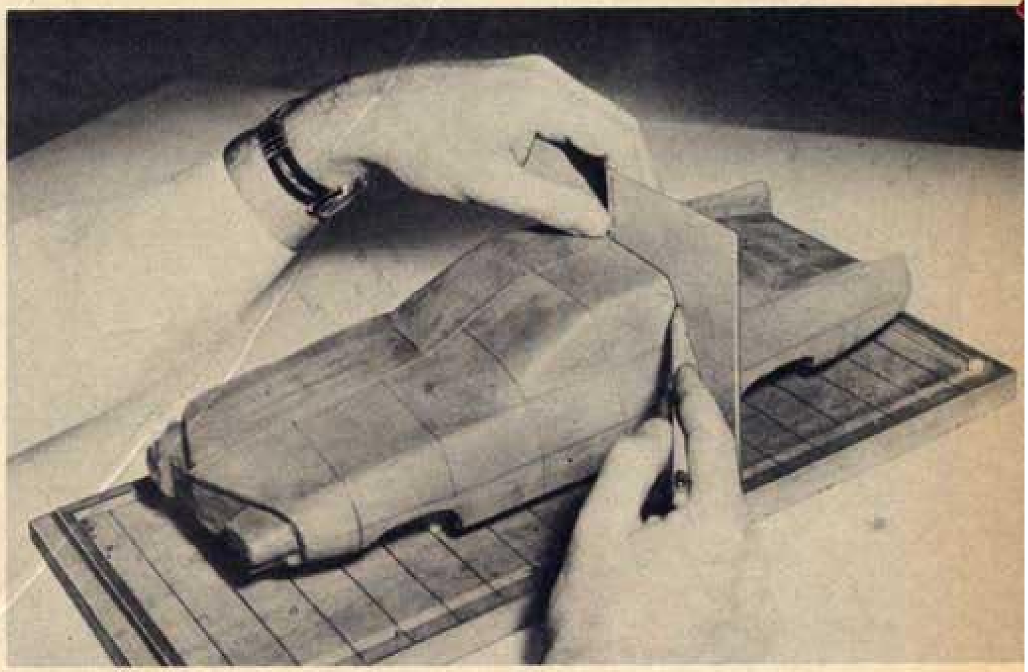


6. Simple homemade tools are used. A scraper, made of a small piece of wood, metal or plastic, can be used to get a smooth surface.

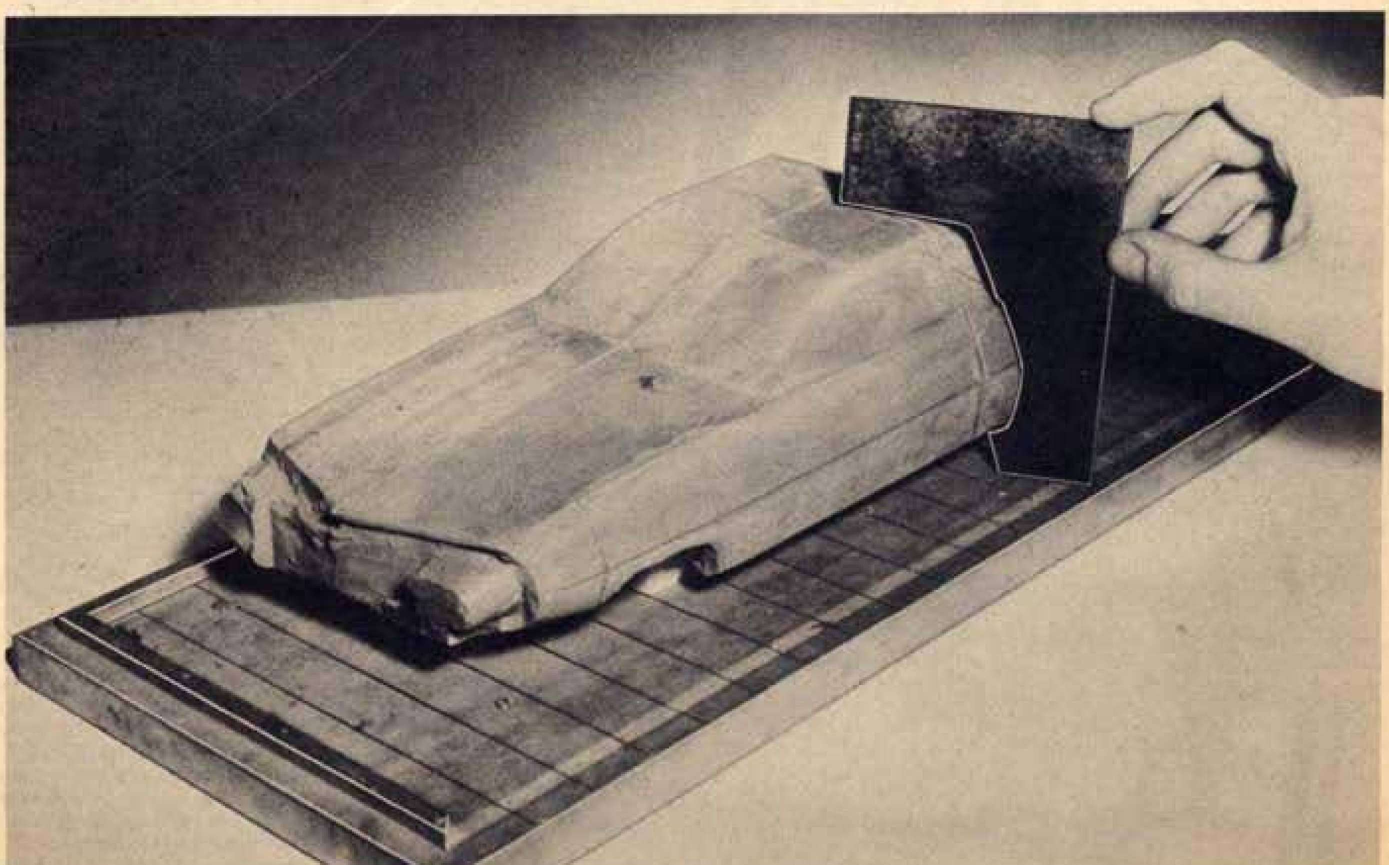
7. An ordinary pocketknife becomes invaluable for marking off window areas, high lines, door and hood openings, etc.



8. After one side of the model meets your approval, mark station lines on the clay, just as you did on the baseboard. The station lines here are one inch apart, but they can be made closer when contour changes occur rapidly. You are now ready to transfer the design onto templates. Use a knife to cut into the clay along the various station lines. Carefully remove the excess clay from the edges of the groove that you cut. Use a piece of stiff cardboard and cut it roughly to the contour of the side of the car at one of the grooves. When you have the rough approximation, insert the cardboard into the groove and use a pencil to draw the outline of the clay on the cardboard. Use a pair of scissors and a sharp knife to cut the cardboard following the pencil lines closely.

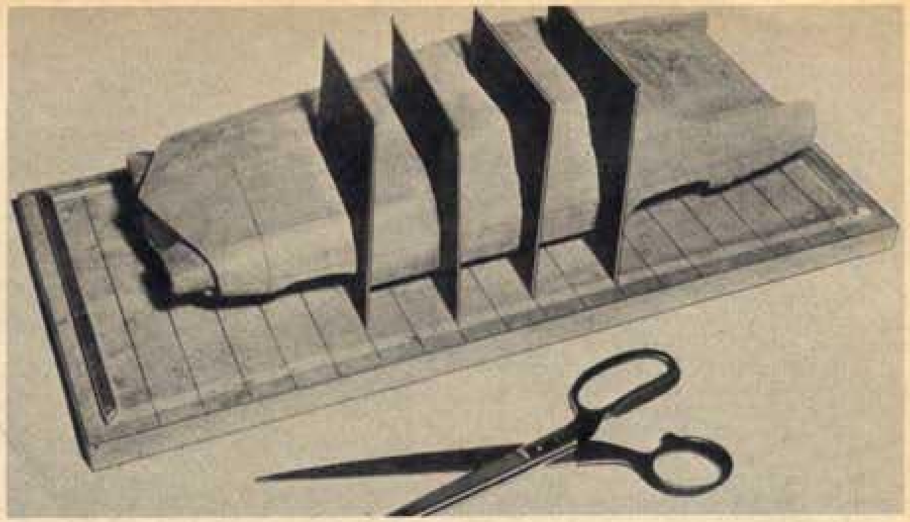


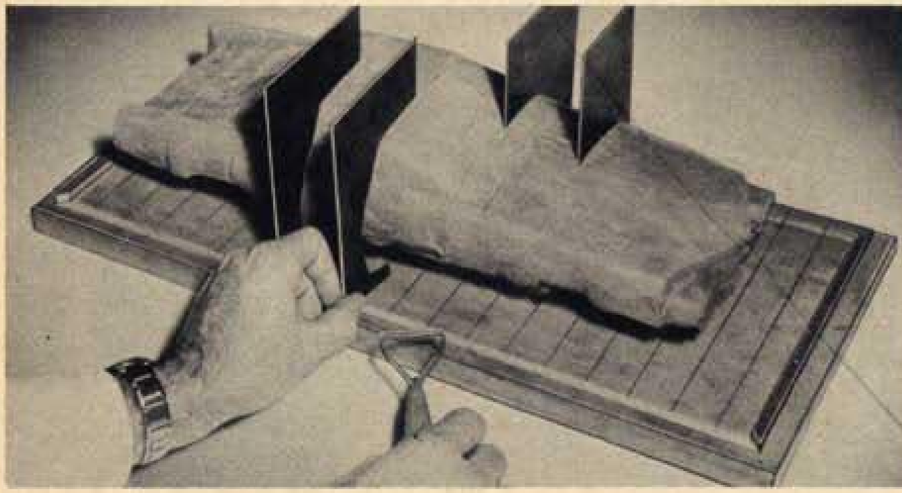
9. You may have to do this operation several times to get the one template perfect, but when you finish you will have the exact duplication of the side of the car. Mark the station line and the template with a similar number for later identification.



10. Continue the same procedure along all station lines in order to have templates for the entire side of the body of the car. The more you have, the easier it will be to transcribe the design to your wooden model.

11. The templates are then used to make the car symmetrical. Simply move the cardboard from one side to the other and fill in or scrape away the clay to get the exact duplication of the finished side. Or, if you have reservations about the car you have just built, the clay on the other side will afford you the opportunity to change the design and then compare the two. This is the advantage of working and testing your design in clay. And it has all been done with a minimum of tools. Most of the items can be found around the house, or they can be made quite easily.





Working in clay has provided you with the following: the opportunity to change ideas; a satisfactory design to transfer to wood; and a complete set of templates to simplify the construction of your model car. But most of all, it has provided the challenge of getting started on a model car. Now, it is up to you to continue the fine job you have begun.

If you haven't already enrolled in the Fisher Body Craftsman's Guild competition, you may still do so just by mailing the coupon below and you may be on your way to a college education.

DON'T MISS NEXT MONTH'S MODEL CAR SCIENCE FEATURE ON HOW TO BUILD A WOOD MODEL.



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Please enroll me in your 1964 Model Car Competition. Send me the free instruction booklet, "Designing and Building a Model Car."

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ADDRESS ______________________
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CITY ______________ STATE ______________
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IMPORTANT: Only boys oorn in the following years are eligible. Check the year you were born below.

SENIOR DIVISION	JUNIOR DIVISION
1943 ☐	1948 ☐
1944 ☐	1949 ☐
1945 ☐	1950 ☐
1946 ☐	1951 ☐
1947 ☐	1952 ☐

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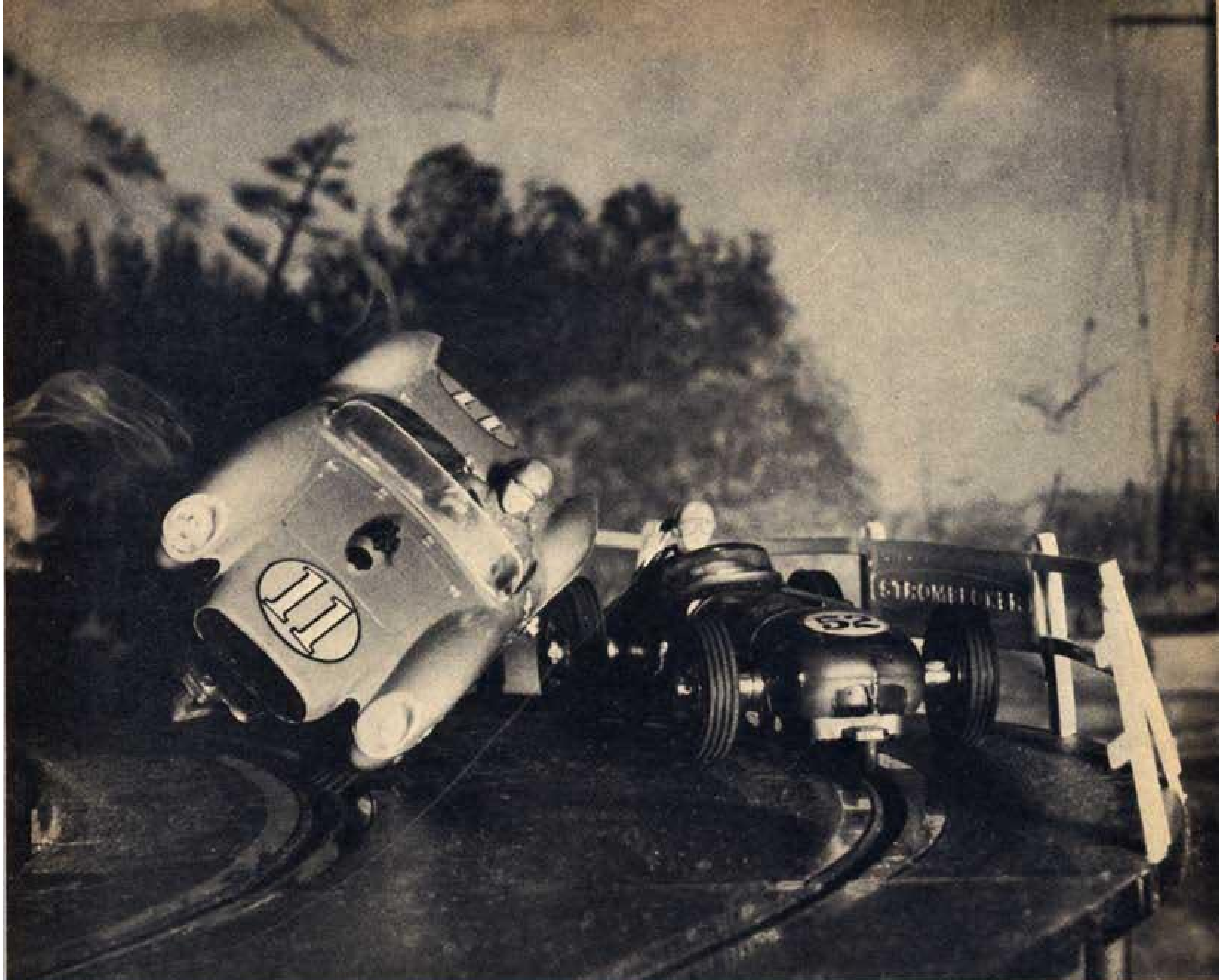


TABLE TOP RACING SECTION

PHOTO CONTEST Each month MCS will award valuable prizes to the readers who submit the best photos of slot racers in action. Send your photos to:

Table Top Photo Contest
Model Car Science
171 Barrington Pl.
Los Angeles 49, Calif.

THIS MONTH'S PHOTO CONTEST WINNER IS RANDY STADTMUELLER, 109 W. CECIL ST., NEENAH, WISC.

SLOT RACING CLUB & TRACK DIRECTORY

Model Car Science, and our companion publication, Model Car & Track, are compiling a list of table top racing tracks for those readers who may not know of a track in their home area. Included in this listing are both commercial tracks as well as club layouts that may be situated in a member's garage or basement. If you are a track owner, send us your name and address and briefly describe your course. That information will be included free in this ever-expanding column as soon as possible.

Alabama

G.B.A. Slot Racers Club, Rt. 1 Box 166, Grand Bay.

Arizona

Warwick Slot Racing Club, 6760 Nelson Dr., Tucson

California

Tandem Hobby Shop, 13862½ Chase St., Panorama City.

Bob's Hobbies-Crafts, 2226 E. 4th St., Long Beach 14, Phone: GE 9-6320.

Babcock Research & Development, 836 S. La Brea, Inglewood.

Rustic Oak Slot Racing, Hiway 9, Felton

Oxwood Raceway, 6015 Woodman Ave., Van Nuys

South Bay Raceways, 1213 Hermosa Ave., Hermosa Beach Phone 367-2811

International Hobbies, 1809 Lincoln Blvd., Venice

International Hobbies, 2302½ Artesia Blvd., Redondo Beach

Le Mans Hobbies, 3909 Sepulveda Blvd., Culver City

Ventura Hobbies, 11746 Ventura Blvd., Studio City, Phone 769-9828

Alamo Raceway, J & R Variety Store, 5 Market Plaza, Alamo, Phone: Area 415-837-9906

"The Sleepers," Rt. 4, Box 403, Lodi

Marina Raceway, 12001 Venice Blvd., Los Angeles 66

5th Ave. Hobby Shop, 2505 W. Manchester, Inglewood

R. E. Owens, 666 North Tustin, Orange

Pico Drag Center, 9316 E. Whittier Blvd., Pico Rivera

Ecurie Concours Model Car Racing Club, c/o Norman O. Davis, 4522 Madoc Way, San Jose

Pioneer Raceway, 13331 Telegraph Rd., Whittier

Hobby Shop, 145 S. Pacific Coast Hwy., Redondo Beach

Howard's Hobby House, 1624 Contra Costa Blvd., Pleasant Hill

Hobby Rama, 826 E. 1st St., Santa Ana

Don Thompson's Hobby Raceways, 9630 Las Tunas, Temple City

Golden Gate Model Road Racing Club, c/o Ken Reilly, 326 Virginia Ave., San Francisco

Antelope Valley Hobby Center, 45013 N. Yucca Ave., Lancaster

So. San Joaquin Slot Racing Ass'n., 4022 University Ave., Bakersfield

Anaheim Miniature Auto Racing Ass'n., 1158 N. Catalpa, Anaheim

Western Model Raceways, 13204 S. Western Ave., Gardena

Telco, Inc., 4718 E. Home Ave., Fresno

Fresno Hobby, 3033 Tulare St., Fresno

Sebring Miniature Auto Racing, 8504 Garden Grove Blvd., Garden Grove

Miniature Racing Center, 1526 Del Monte Blvd., Seaside

D & S Hobby, 184 San Antonio Rd., Mt. View

K. P. Hobby Shop, 7716 Beverly Blvd., Los Angeles 36

Colorado

Aurora High Model Club, c/o Stan Reeves, 10th and Newark, Aurora 8

Rocky Mountain Miniature Racing Association Model Hobby Shop, 38th and Federal Blvd., Denver

Scale Model Engineering Club, Science Dept., Euclid Jr. High School, Littleton (Denver South)

Connecticut

House of Hobbies, 22 Nashawena Ave., West Haven

Illinois

Heckler, 536 Stange Ave., Springfield

East Coventry Race Course, 1328 Madison St., Evanston

Aurora Cycle & Hobby Center, 68 S. Broadway, Aurora

Speck's Bike & Hobby Shop, 328 E. North Ave., Northlake

Indiana

Raceland Miniature Raceways, 2107 W. Washington St., Indianapolis

Iowa

Sunnyside Racing Association, 2301 Gear, Burlington

Marshall Miniature Speedway Association, 13 North 1st Street, Marshalltown

Bob Diekmann (GP Road Racing Track), 1221 Commercial St., Algona

The Hobby Shop, 716 10th St., Marion

Kansas

"Sainty Ram Rodders," Located basement of First Methodist Church, St. Francis

Slot Hawks, c/o Herbert Williams, 2009 Clare Rd., Lawrence

Pitt Strippers, 208 E. 23rd St., Pittsburg

Kentucky

Frankfort Ave. Toy & Cycle, 2644 Frankfort Ave., Louisville

Louisana

The Hobby Guide, 4513 Freret St., New Orleans 15

Massachusetts

Witch City Model Car Club, c/o Roger Demers, 18 Silver St., Salem

Mini-Racers, c/o Herb Phinney, 52 Thistle St., W. Lynn

T. Rowe, c/o "The Ramchargers," 87 Congress St., Orange

Lake Side Raceway, Lake Attatish, Anesbury

The Ace Racing Club, c/o John O'Brien, 12 Witt St., Lynn

"The Revers," c/o R. Ward, 10 Thistledale Rd., Wakefield

Bill's Hobby Land, 245 Essex St., Salem

Michigan

Ford Auto Speedway Track, 381 Brentwood Dr., Inkster

Top Track Hobby Shop, 6871 Middlebelt, Gardena City

Seaway Speedway, 2700 Fort, Trenton

Minnesota

The Dukes of Oil, 1009 W. 13th St., Wilmar

Missouri

The Ecurie Liberty Club, 906 West Hiway 10, Liberty

Dunn's Den, 7114 Prospect, Kansas City

Keencraft Hobby Center, 5300 E. 24th St., Kansas City

New Hampshire

Charleston Model Road Racing Club, Box 296, Charleston

New Jersey

Richard Erickson, 517 80th St., North Bergen

Totowa Hobby Shop, 388 Union Avenue, Paterson 2

Instant Speedway, 649 Laurel Ave., Hazlet

Colonia Speedways, 70 Berkeley, Colonia

Tiny Tots, Inc., 236 W. Front St., Plainfield

The Model Roadracing Club of Elizabeth, 482 Rahway Avenue, Elizabeth

Richard N. Hughes, 45 Hemlock Road, Short Hills

New York

Hobby Haven, 688 Winton Rd., N Rochester 9

Frank's Speedway, 4263 Cameron Drive, Williamsville 21

The Scavengers, 540 Morris St., Albany 8

Newark Slot Racing Club, 124 Rose Dr., Newark

Robert Haroutunian, 90 McLean Ave., Yonkers

North Carolina

Tommy Poe, 4801 Hardwick Rd., Charlotte

Catamba Auto Modeler's Slot Division, 516 Belmont Rd., Belmont

Bill Scott, 5301 Randolph Road, Charlotte

Ohio

Jerry Osborne, 6127 Hammel Ave., Cincinnati 37

Lakewood Scale Model Raceways, 17114 Detroit Ave., Cleveland

Carroll Course, 2729 Cypress Way, Cincinnati 12

Forest City 1/25thers, c/o Ron Smith, 3344 Linden Rd., Rocky River 16

Lusch TV and Hobby Shop, 812 Bennett St., Marion

Oklahoma

Speedcraft Hobby Center, 700 N. Main St., Owasso

Oregon

Northwest Scale Racing Association, 1728 N.E. 40th St., Portland

Western Scale Speedway Ass'n., 480 Minnesota St., Lebanon

Miracle Miles Slot Club, Highway 101, Box 643, Taft

Pennsylvania

SYC Racing Club, 615 Clay Ave., Scranton 10

Carmichaels Slot Car Racing Ass'n., 212 Pine St., Carmichael

Baby Town Toys, Germantown Pike & 202, Norristown Sq., Norristown

South Carolina

Model Auto Racing Association of Columbia, 1801 Green St., Columbia

Tennessee

Hobbycraft Hobby Shop, 4003 Hillsboro Rd., Nashville 12

Texas

Ohmco Raceway, 837 W. Davis, Dallas

C. K. Beck Co., 1420 N. McCullough Ave., San Antonio

S & L Raceway, c/o James Smith, 717 So. 11th, Temple

Washington

Parkers, Burien Hobby Center, 619 S.W. 152nd, Seattle

Empire Hobbies & Crafts, 6740 Empire Way South, Seattle

Wisconsin

Settra, 2024 N. 48th St., Milwaukee

Road Angel Auto Club, 1056 Elmore St., Green Bay.

Oklahoma Hobby Shop, 1103 W. Oklahoma Blvd., Milwaukee

Tri-City Dragway, c/o Dennis Schmidt, Box 216, Stratford

Canada

Maxport Slot Car Racing Club, 5 Sellmar Rd., Weston, Ontario

Rigby's Variety Shop, 3847 Bloor St., West, Islington, Ontario

Tom Carter, 53 Columbia St. W., Waterloo, Ontario



TRACK TALK

BY BILL SIPPEL

Many of our readers suggest new ideas that we feel other readers would benefit from. Paul Imhulse from Maineville, Ohio expressed interest in the upcoming Cressi track as to layout.

Tom Avenengo from El Paso, Texas tells us about another form of racing. He builds up Monogram midgets and reworks Monogram Indy cars into roadster midgets. Although they figure out to 1/18th scale, they are really no bigger than regular 1/24th cars in overall length. If enough of you think this form of racing would be of interest let us know and we'll arrange for an article on them.

It does pay to write M.C.S., and we enjoy reading your mail . . . our hobby is growing, but fast. Six months ago I was in a particular town in Indiana. A club was just starting and sales in the only hobby shop were on the upswing. A more recent visit back to the town showed marked progress. The club is going strong and the shop now has a track in it, heavy with meter customers. A second shop (not related) is also open now and running with a track and an equal amount of eager customers. Yes, time and the hobby are marching on. By the time you read this, the Strombecker Regional Drag Championships at Notre Dame will be over. They were run under the rules of Sugarplum, a hobby shop in South Bend, Indiana. I met and talked with the people and they handed me a well established rule book. They are looking for other groups to stage interclub drag meets, so if they are in your area, look them up in the phone book.

In decorating your layout, grass, dirts, etc., sometimes create problems. Like loose particles that end up in the slot or on the road surface, making things more than a little difficult. The usual method is to apply a glue like material, sprinkle on grass and blow off the excess. Still, each day a little breaks loose and moves around. Now, you can buy spray bombs of grass, dirt, snow etc. It looks real good and stays where you shoot it. It is a product of Life Like and is standard in most hobby shops. Just this much attention to a track, even without trees, buildings etc., makes a vast appearance improvement. Once you start decorating you will find it can become a very important part of your hobby. We all know that our first trip to a new track, our first glimpse of it creates impressions one way or another. Settings that suggest realism do a lot more than just a drab table top with slots running back and forth. Also, as an owner of a well decorated track you just feel better when that new fellow steps in the door. In many cases you will get help in the decorating department from the feminine side. This appeals to them, I guess from the standpoint of not liking things messy. You might also find out that if you stick a car together for her as a reward, she might enjoy running. In some cases they even enjoy winning.

One thing that comes to mind here is that it seems to be getting harder for a beginner to start with a group, because everyone is going fast, and nobody wants to take the time to teach a new man the ropes. Your love for racing keeps you with it while others give up and soon you are one of the FAST group. Now you are so busy going like blazes you have forgotten your early starting period and the problems you faced. Other people are now at this point but you are not offering a hand. Your club isn't growing. Look back, hot dogs, take time out to help that new fellow. Remember . . . just a little tip or a kind word and you'll gain a friend and another competitor.

I recently heard a few sentences about how to save drag racing. Someone suggested that it should be divided between the pros and amateurs. He thought amateurs shouldn't have to compete against the pro. This seems to make some sense if you aren't thinking too clearly, or if you have never seen electric drags. Either the cars run from an automatic switch, that powers both lanes simultaneously, or each driver pushes a button. In the first case the fastest car wins. In the second case it could be reaction over speed. All a man with poor reflexes needs to do is get a new driver to run his car through for him. Now, how do we split the cars and people? Let us say they'll call a pro a person that goes quicker than X e.t. Where do you split it? Let's say they pick a person that has won X number of meets. Then an amateur could buy a car and have a picnic up to that point. I just cannot see a way to slice up the cars and people into pro and amateur groups. There are ways to start steering the hobby back to everyone, and a lot of work has been done along these lines. Basically, the few who dominate the hobby will have to step back into line and follow the rules. That is much easier than everyone else dropping the rules and going the one of a kind route. Not everyone can come up with special built motors, chassis, tires etc. Also, it is not common to have a mill, turret etc. available to everyone. Under these conditions the hobby should be for everyone rather than a few, let's consider rules for all.



"What's the matter — haven't you ever seen a modified hand controller?"



VARNEY

BY BILL SIPPEL

These tests are not performed to compare brand against brand, but rather to show the cars as they normally appear, and the minor modifications that can be made to improve them. We are not concerned with appearance or details of the bodies when testing. Our main objective is to see what can be done to improve performance of the car with a minimum cash outlay.

As with all MCS tests, cars evaluated were taken at random from a dealer's shelf; they were not supplied by the manufacturer. All MCS "road tests" are run on our track (designed to comply with International rules) not the manufacturer's.

Designed for use on most 1/32 and 1/24 scale tracks, including Strombecker, Eldon, Scalextric and Gilbert, the Varney line now has three authentically detailed 1/32nd scale sports cars: a Corvette Sting Ray Hardtop, Corvette Sting Ray Convertibles and Jaguar XKE Convertibles.

Selecting an XKE roadster for this test, we were first quite pleased to find that the car is in scale. Appearance-wise, all Varney 1/32 scale models are over sprayed with actual auto enamels and are available in four colors: red, burgundy, blue and green.

Engineered primarily for a Varney track, the car has a lock

slot and pin that can be pulled, the main problem here is that the contacts are too far from center for our regulation track. Varney does solve this situation, however, with a replacement guide they sell for 60¢, complete with braid. The adjustable braid on this guide may be moved in or out from center to operate the car on various tracks. When we installed the new guide, we had no problems and were indeed wired the proper way, positive on the left. A word of caution: unless you push upward on the guide so a light pressure is on the contact loops of the lower body panel, you can get intermittent contact. With the lock collar provided for the guide installed properly the first time, you will be running trouble free.

Checking the car over closely, you will find it has a two speed rear end. Selection of rear end ratio is made by just loosening a set screw and sliding the gear unit to the opposite gear. With their stock guide it makes no difference, as it spins 180 degrees and takes care of itself. However, with the conventional guide, you must remove the top and switch motor wires, not a hard job, as there are screws for this. Mating with the 10-tooth brass pinion are a 26-tooth or 32-tooth steel crown to give ratios of either 2.6 to 1, or 3.2 to 1.

Powered by the KM-1 motor, which is unconditionally guaranteed for five years, other mechanical features include the gear-shift lever for two speed control, and self lubricating wheel bearings.

Wheels are nylon and tires are a semi-hard rubber. The drawback, as with some other models, is that the wheel shape eliminates the use of other makes of tires.

In general, this is a well built, good looking car. Chrome, glass areas, trim, drivers, are all exactingly reproduced, trimmed and decorated. Racing numbers are painted on each car. Chassis is completely enclosed and vented, adding stability, extra strength and authenticity to the models. Each car is attractively packaged in a reusable plastic case.

As always, our first test is with the car fresh out of the box. Of course we changed guides, but we are still strictly stock.

We want to mention here that our test track has been changed since the last test, so please do not try to compare these results with previous times. A four foot section was added giving eight feet more straight total. On this test, you must compare only the times from run to run for improvements.

On the first runs, we used the 3.2 to 1 gear ratio as this is the way it was



set. The car was very forgiving and did not try to deslot unless driven completely out of reason. I must say the guide system held better than any other car tested to date. Our first run was quite good and the car was smooth. Tires and wheels were very round and there was no axle play. The car ran well without weights or modifications. We did have more than enough wheel spin.

We noticed that on the first test the gears seemed tight so we adjusted the mesh and went back to the track. With the new mesh the car picked up speed and ran into the turns much better. Times were recorded and had decreased. We found that with the wheel spin, the car would lay out a lot when you hit the turns hard. In a comparative test, the car was feathered through the turns to keep the rear end from drifting. Although only the driving style was changed, times dropped.

Next the car was dismantled and other brands of tires were brought out, but none would fit the factory wheels. Changing wheels so other tires could be used is a major operation. The rear end is set into the body with fully enclosed pillow blocks. Therefore, the stock rear end would have to be torn apart to get the pillow blocks off. To make such a conversion would require a threaded axle, set of wheels and tires, all at a cost of around $1.00. We didn't want to attempt this at this stage so we looked for another way to make gains.

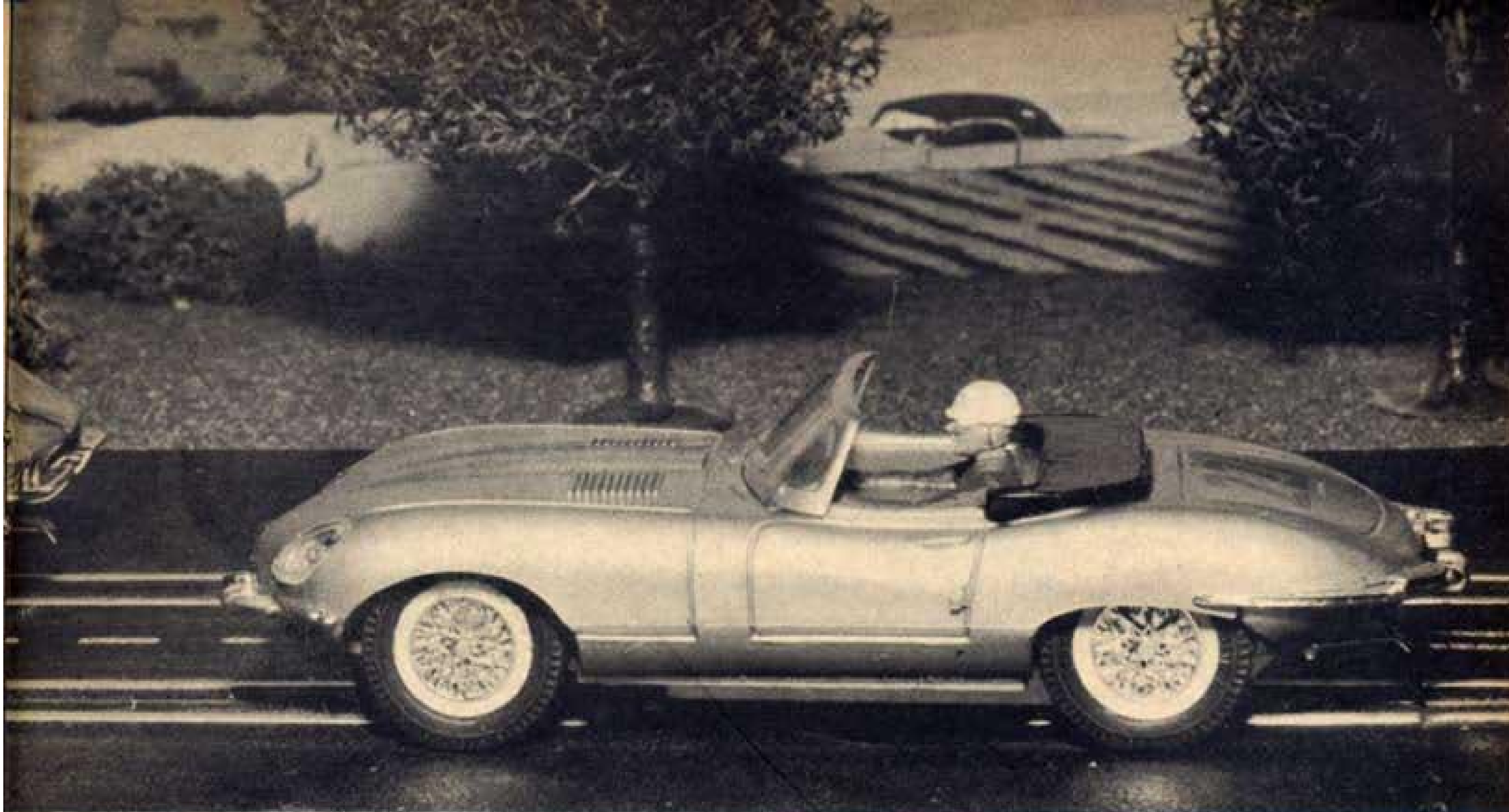
While the top was off, we found why we were having gear problems. The large crown had a slight wobble and when meshed properly at the loose side of the crown, the pressure was so tight on the tight side that it was moving the motor on its mounting block. This was straightened. We should point out here that it was nothing radical and on a par with pressed gears. In checking the motor, it was found that more brush tension gave more RPM. It is easy to give more pressure by just bending out the springs further than they are. It was also found that you can really get the best gear mesh with the car apart so you can see the clearance you are getting.

With the above mentioned changes, we reassembled the car and went back to the track. Times dropped to a worthwhile amount for the time spent. We were still with our wheelspin only more so now.

Next, the gear was changed over to the 2.6 to 1 and to keep going the same way, the motor to pickup wires was changed. The smaller gear was a much smoother mesh but driving with the added coast was a little hard to get used to. Although it was felt this would be too high to give good times, the gear change stopped the wheelspin and the times were nearly as fast as the lower gear. To get these times, you have to concentrate much harder as the car is less predictable through the turns.

All the tests seem to indicate that the 3.2 to 1 gears with a better tire, a softer, better biting rubber, would be the fastest combination.

We did not dismantle the rear end for a wheel change but stopped our tests



A STOCK VARNEY STING RAY AND THE JAGUAR XK-E ARE SHOWN SIDE BY SIDE ON THE TRACK FOR COMPARISON.

without any financial modifications. A conclusion here would be that the car would be competitive with other, more expensive cars.

In the speed department, out of the box, the car will lose by nearly a full lap or be 8.2 seconds behind at the end of 10 laps. This does not seem a great deal but a lap is a lap. See the box score for all other factors.

The thought of changing rear ends was so compelling that a few days later the change was made. We took apart the stock rear end, used the stock gear and pillow blocks, and substituted the rear axle, wheels and tires. Then tests were run as before, using first the 3.2 to 1 ratio and then the 2.6 to 1 ratio. As was thought, the change was well worth while and times dropped to quite a degree. The parts we used came to $1.30 to provide a combination that gave the fastest times. Several brands of tires were tried but only one gave better time than the tests made with stock tires. We will not disturb our test box data or run a cross check of total time gained. Those of you interested in finding the results may tabulate it yourself. Again taking the average per lap from 5 lap runs with the modified rear end and 3.2 to 1 gears we ran 8.31 sec per lap. On a single all out lap, we turned an 8.15 sec lap. The same rear end combination with 2.6 to 1 gearing gave 8.55 sec per lap. Some facts would show the tire change really helped the 3.2 to 1 gears more than the 2.6 to 1. This is not surprising when you remember our main problem was wheelspin. The only thing we really gained through the change was a tire change. The different axle and wheels only allowed the tire change and wouldn't contribute anything to the speed gaind.

Parts used:
1-3/4" 1/8" 5.40 threaded axle
5/8" aluminum wheels threaded 5.40
best times on Auto Hobbies #401 tire.



TRACK TEST DATA:



Car Tested	**Varney XKE Jaguar Roadster**	**Advertized 1/32 Scale**
Tire Dia.	1"	
Gear Ratio	3.2 to 1 for tests # 1 2 3 & 4 2.6 to 1 for test #5	
Wheelbase	3-1/16"	
Track width	1-9/16" rear 1-5/8" rear	
Car weight	4 oz.	

Seconds per lap-average of 5 lap runs

Test #1	out of box 3.2-1 gear	9.64	5 lap runs are made then averaged out per lap. This eliminates the all out hot lap that could not be maintained. Ex. The car turned a single lap run at 8.7
Test #2	as #1 with gear mesh loosened	9.48	
Test #3	as #2 softer driving to stop drifts in turns	9.28	
Test #4	Realign gear and change motor brush tension	8.82	
Test #5	as test #4 with gear changed to 2.6 to 1	8.95	

BUILD A RACE COURSE FOR PENNIES

Here's a simple and inexpensive way to add more "miles" to your track

by George Siposs

If you're the owner of a slot racing starter set, you are sure to get the urge to enlarge it. Individual track sections are usually relatively expensive if the addition you are planning is extensive. Here is an easy way to add fun while cutting costs by using odd pieces of wood, nails, etc. that can be found in any household.

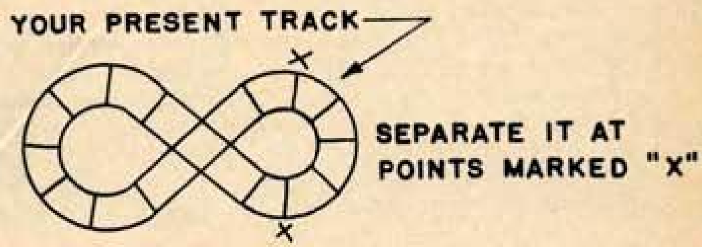
It is more difficult to make the curved sections than the straight ones. Therefore, we shall use the turns that were supplied in the kit and concentrate on making the straights, which will give you lots of speed.

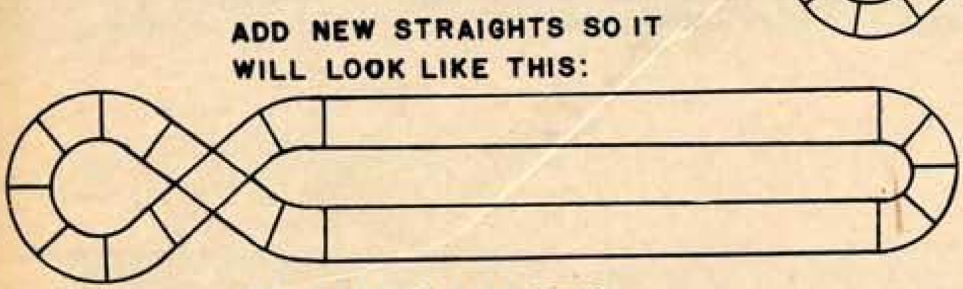
The only important dimension you have to match is the center section spacing (see fig. 3). In order to achieve a smooth transition from the home made parts to the factory made sections, the center sections have to match exactly. For the other parts of the track you can use wood approximately the width of the cars. (In the straightaways, the cars need little more than their own width whereas in the turns they need more room for proper four wheel slides.)

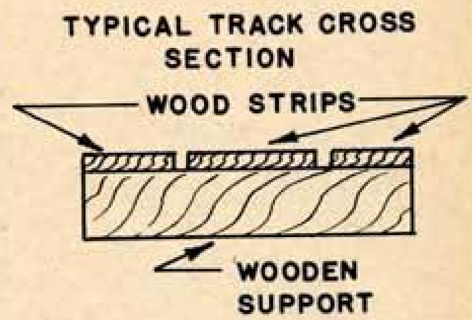
The thickness of the wooden parts is not important as long as the cross support members are cut to provide an even level for the track. Any kind of scrap wood can be used: old 2 by 4 pine, plywood etc., as long as the edges are straight cut and parallel.

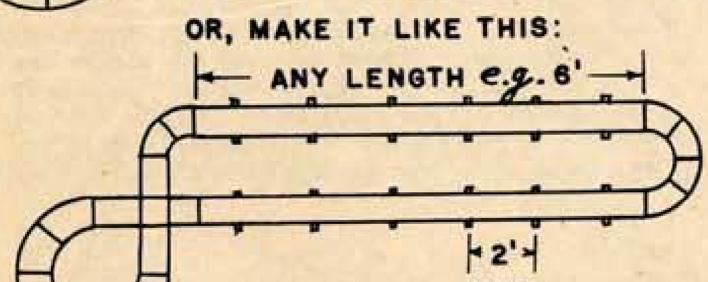
The "power tape" is made from tin foil. Cut 1/4 inch strips of the foil to the proper lengths and cement them onto the track. The most critical points are the connections from the newly made track to the already existing track sections. You can bend the foil at these points and squeeze it under the present tape. The electrical connections are made in the conventional manner on the factory made connection points.

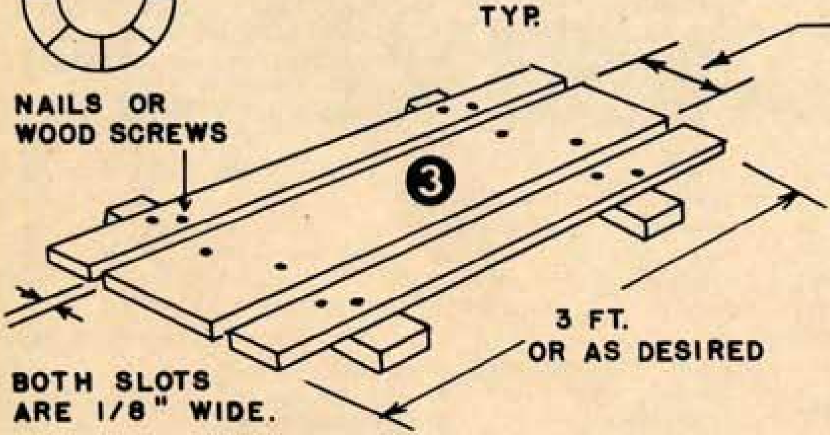
This type of construction is most suitable for the 1/32 layouts such as Strombecker, Eldon etc. It is advisable to fasten the course to a solid support so that the alignment is not disturbed. The cost of the construction is not likely to be over $1.00.

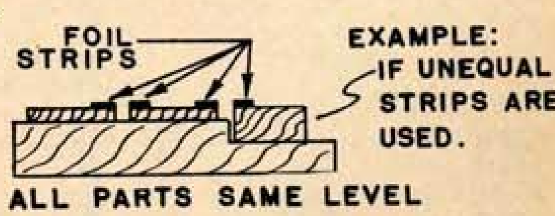


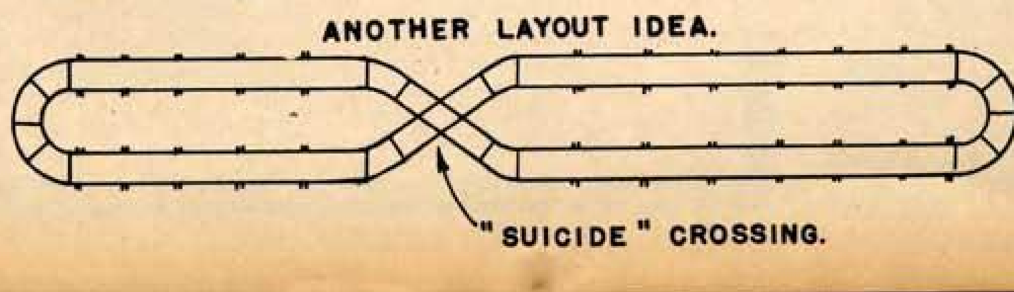














SLOT RACING IN THE MIDWEST

by Dick Dobson

NOW THAT WARM WEATHER is upon us here in the midwest again, and the roads are a little easier to travel, activity is picking up along the NASRRA circuit. The seasons opener will be the Second Annual "Kleine Milwaukee Autosport Rennen." This first Grand Prix of 1964 will include 1/32 scale Formula I, Sports Car, and Grand Touring classes. Clubs from as far away as Detroit have entered. All are invited, and if this won't get you there, then, you are all challenged, dared, threatened, etc. Automatic lap counters, race programmer, with GT racing coming off Saturday night, April 11, and Sports and F-I on Sunday. Anyone interested can get additional info from Pierre Perrin at 2024 N. 48th St. in Milwaukee.

Next we move to Detroiter Don Lupp's track sometime in May, no dates have been set sofar, but info can be had from Don at 30655 Westfield, Livonia, Mich.

The Hobby Show in Chicago brought a lot of people out this way and I got to meet and talk to a lot of them from all over the country. Bob Clidinst stopped by and we gabbed half the nite. His group races Championship Indy cars primarily along with Sprint, Midgets, and the normal Road Racing variety. They, the Indiana Miniature Racing Association, are proposing a 500 mile classic, on or around Labor Day. It will be at least a two day affair with qualifying and the whole bit. Only the fastest 33 cars will make the starting field on the 62 ft. four lane 'Oval'. All cars will be 1/32nd scale, with models of any real car attempting to qualify at Indy in the last five years being eligible. This group will certainly put on a whopper of an event, with all the color and ceremony associated with the real Indy '500'. For more info, write Bob at 5807 Sunwood Dr. in Indianapolis.

Ever wonder why Road Racing car designs differ so from one section of the country to another? I'm sure we've all read about or seen pictures of a real going bomb and figured if this thing went fast then all the other guys in the race were Mickey Mouses. The trouble is that the car probably does go fast in it's natural habitat, but the statements made about it imply that this car would beat the world, if given the opportunity.

Let's try to figure out this big variation in cars. There are many things that determine how we build our cars, but I believe the two main factors are: voltage (power supply) and traction.

Making sure the voltage was the same on all road circuits would settle the mystery of why a certain motor is tops at a certain gear ratio on one track and a real dud on another. I suppose on large ovals and figure eights higher voltages are in order, but the only benefit I have gotten from it on average road circuits, is an overheated motor and a fried hand controller, and in some cases had my wipers arc so badly they would burn off. The best way to get the voltage even and at an honest 12 volts is to go battery. This pure DC is not only better for your motors but gives adequate punch to run all the cars in your club at the same time with no voltage drop and power surge when a couple of cars come off the track. Most 12 volt rated power packs probably go as high as 16 volts when the cars are running without any load on long straights.

All road circuits of similar configuration, probably have laps speeds very much the same, but we all get there differently. I can only tell you what and why we use what we do around here and guess at other areas. The traction must vary from some tracks to another and therefore determine how the chassis of our cars will be built. As traction or grip increases the center of gravity of the car must go down, or tipping out of the slot will occur before the car goes into a somewhat controllable slide. Hence, grippy tracks seem to require somewhat heavier cars, for the weight can be gotten only so low on a lightweight car. In other words, the only way to lower the CG of a light car is to hang more weight down somewhere, assuming that the body and chassis is built as low as possible. Coupes are an excellent example of this.

On a track with less traction, a light car with a high CG will corner better because of the better weight transfer to the outside wheels. In some cases a light car will accelerate better on a slippery track simply because there is less weight to get moving. Of course in other cases the addition of a little weight to the rear usually increases grip enough to offset the added weight.

These differences in voltage, traction, and track shapes that make our cars differ as to motors, gears, chassis design, tires, etc. will always be a stumbling block for any type of fair National competition if we do not try to reach some general agreement. Don't sell short any design, until you have looked at it in its proper perspective. Some of you people get out of your holes and show us some new designs on cars that really move, for the Milwaukee or Detroit GPs.

It's always good to hear of new activity and to add another track and group to compete with. Especially if it can be considered for a large event for inter-club competition. How about it, anyone got a four lane track at least 60 ft. a lap, in the south Chicago area? This makes an ideal location for a lot of clubs in the Midwest, as we all had a good time down in Glenwood for the Midwest Grand Prix last fall.

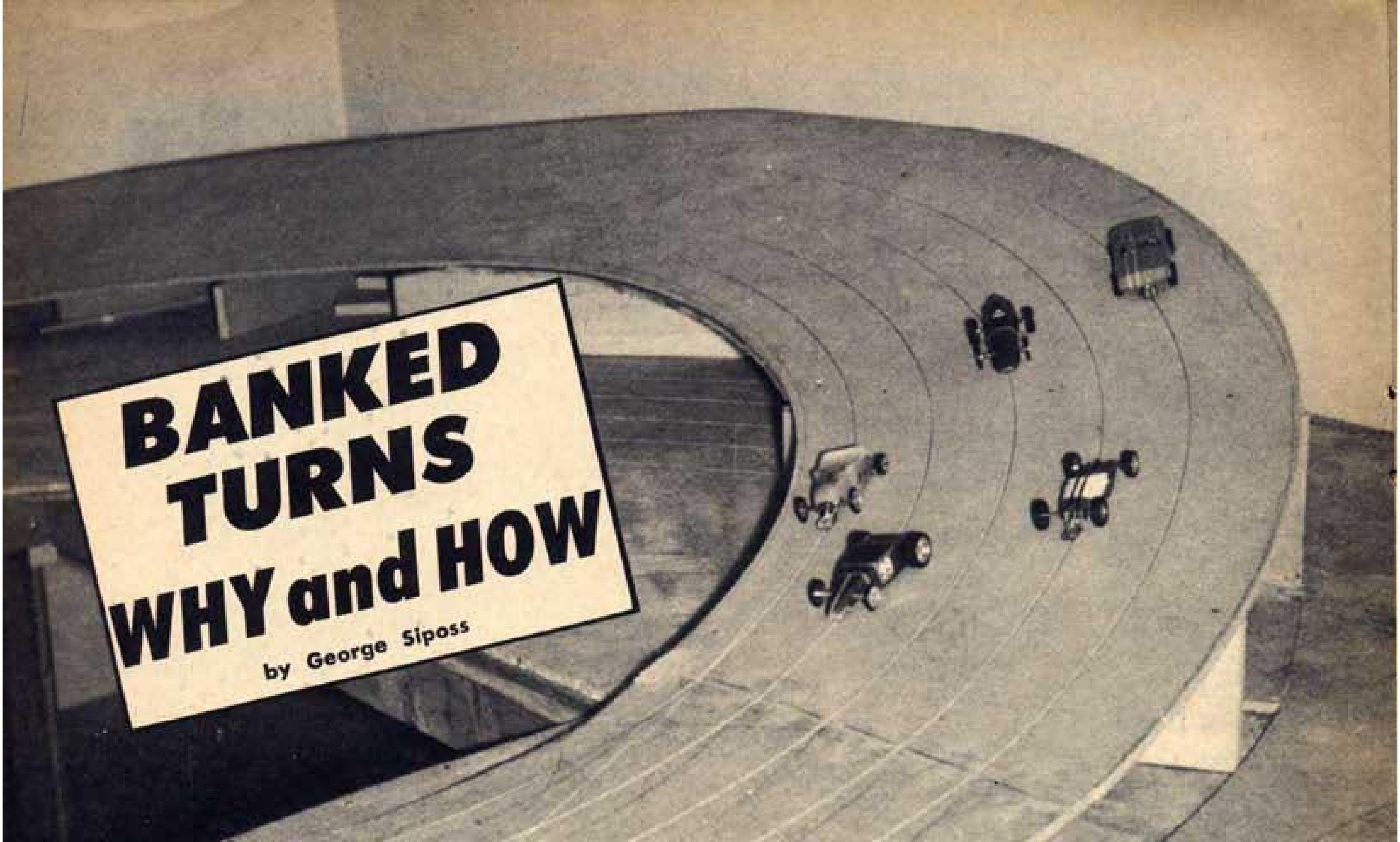
Glenwood's club is going strong, again now, after slowing down a bit after the switch from rail a few years back. Anyone interested in the South Chicago area, contact Wally Buratto, at 10 Wabash Ave., in Glenwood.

West siders can get ahold of Glen Seegers at 337 N. Charlotte St. in Lombard, Ill. Out in the Aurora area, 'Ol Timer' Mike McWilliams is beating the brush for new members, sneak in on him at 1141 Homer Ave., in Aurora. Had many a good bash with Mike and the bunch down there.

So far I have stuck primarily to 1/32nd scale activity here in the central part of the country, because it is what I am more familiar with. Let me hear from you in all scales and types of racing around here, and I can keep us all informed on new happenings, and try to do a bit on a couple of new groups each month. Send any news and club pictures to me c/o MCS, 171 S. Barrington Pl., Los Angeles, Calif., 90049.

BANKED TURNS WHY and HOW

by George Siposs



SLOT RACERS usually want to know why certain modifications make cars go faster and how to do these modifications. A survey we recently conducted revealed that most of them realize that the only way to get *maximum* speed out of a car in a turn is banking the turn. When asked: "why bank the turn" most of them just said "because it makes the cars lean in . . ." Without going into too many unnecessary details, we shall give you the real reason for banked turns.

When the car is at rest, only one force acts on it i.e. the force of gravity. This force can be called "g" and represented by an arrow through the cars center of gravity. The direction of the arrow is the same as that of gravity i.e. downwards, and we shall make the length of the arrow to a certain scale. For instance, each ounce will be represented by 1 inch of length. (The arrow for a 2.56 ounce car would be 2.56 inches long.) In a turn the car is acted upon by three forces: gravity (as shown above), centrifugal force and the reaction of the track on the wheels (concentrated through the center of gravity).

We know that the centrifugal force varies directly as the square of the speed and indirectly as the radius of the turn. If we represent all these forces by arrows pointing in the proper direction, and having a length proportional to their magnitude, we can represent this as shown in Fig. 1. Consider the car rounding the turn in a nice smooth manner. We call this condi-

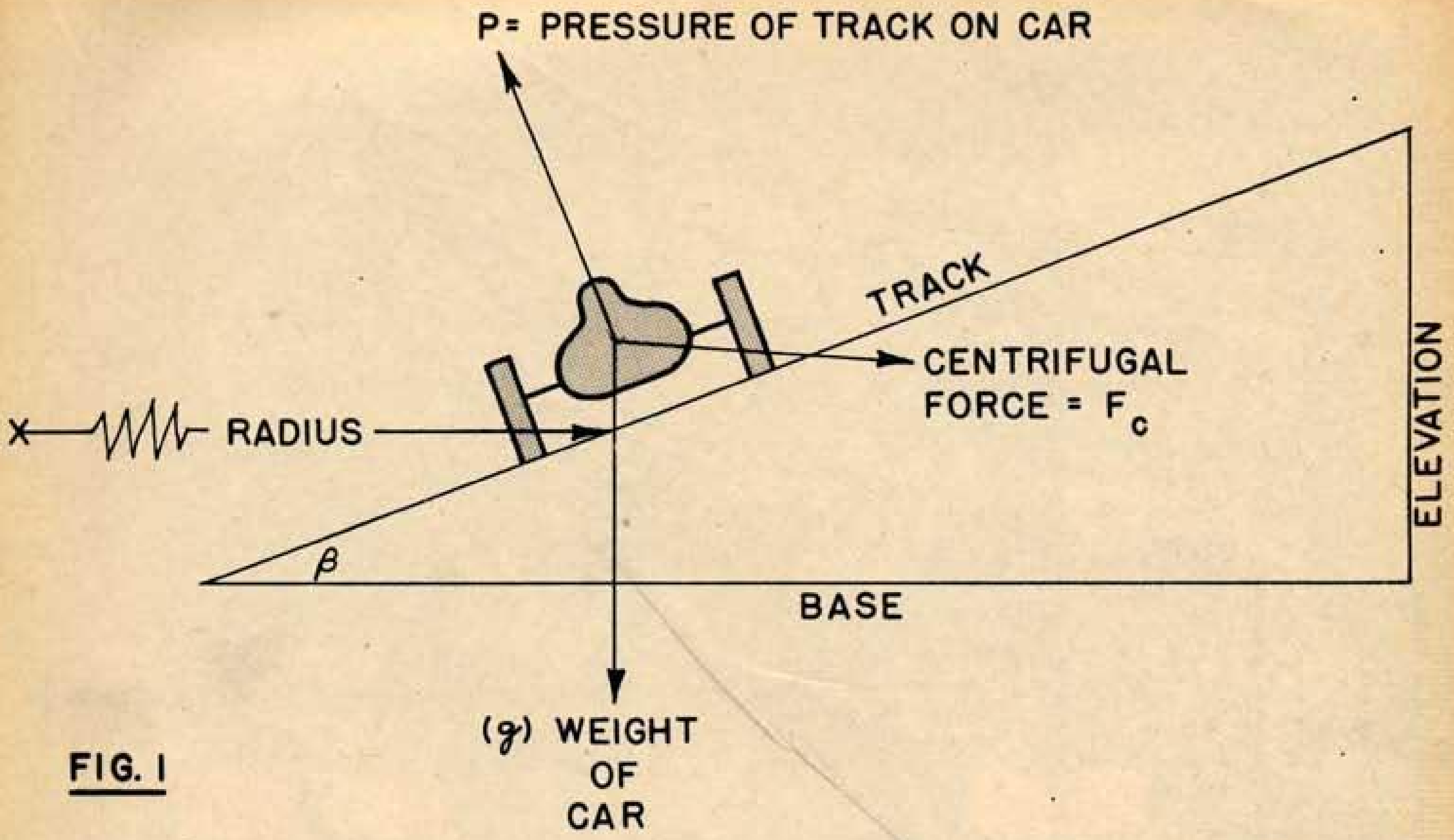
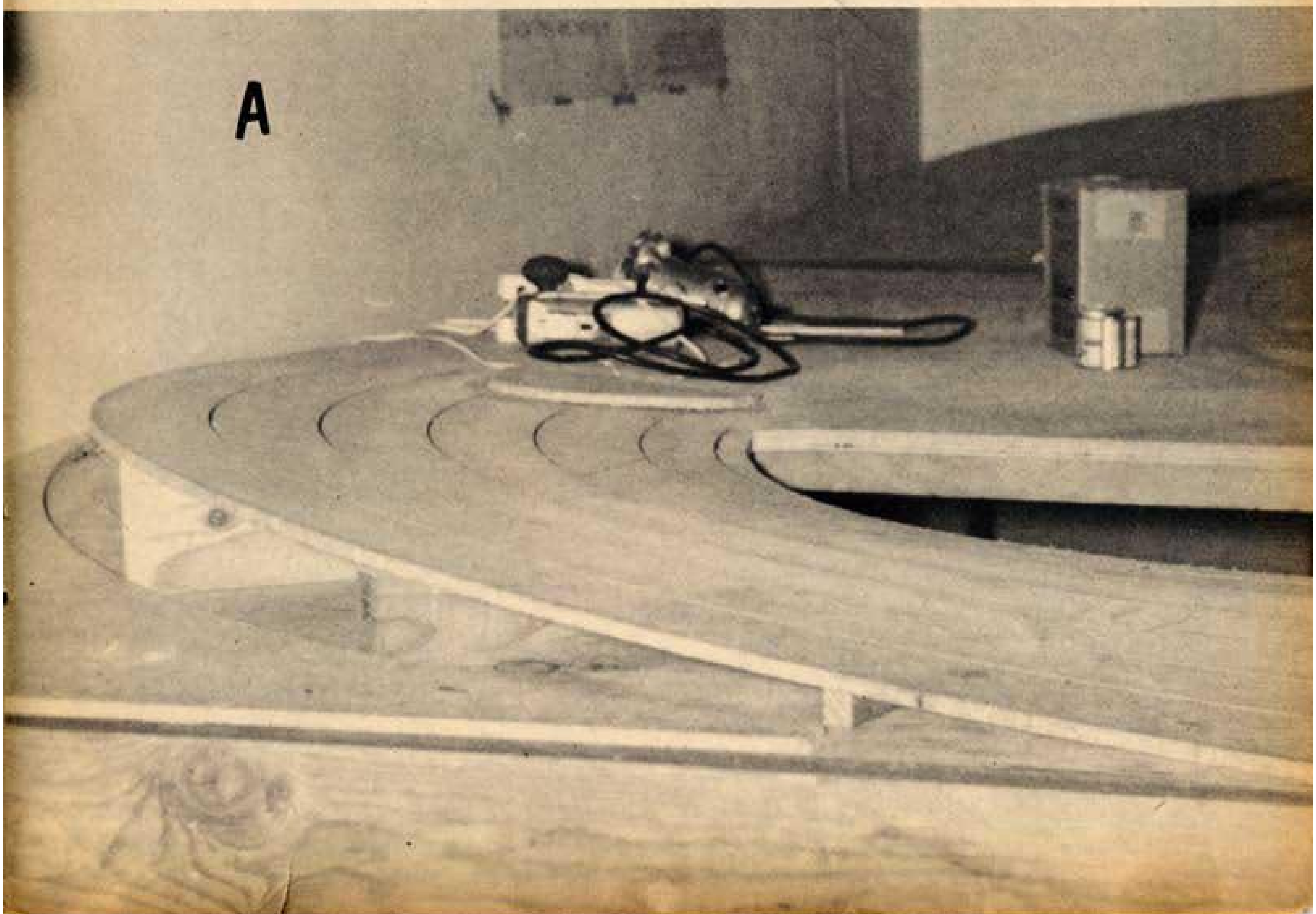

P= PRESSURE OF TRACK ON CAR
TRACK
CENTRIFUGAL
FORCE = F_c
ELEVATION
X
RADIUS
β
BASE
(g) WEIGHT
OF
CAR

FIG. 1

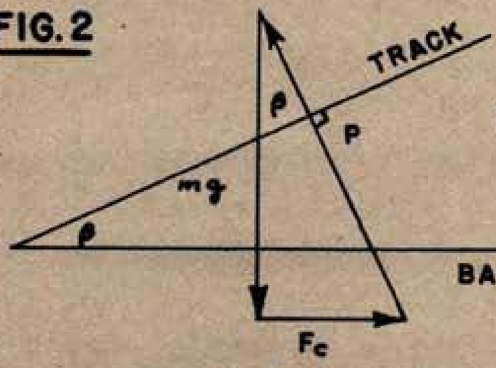


A

$$F = \frac{mV^2}{R} \text{ (SIMPLIFIED)}$$

WHERE, V = SPEED OF CAR (f.p.s.)
R = RADIUS OF TURN.
g = 32.2 f.p.s.² "GRAVITY"
F_c = CENTRIFUGAL FORCE.
m = MASS OF CAR

FIG. 2



$$\text{HENCE } \tan\beta = \frac{F_c}{g} = \frac{mV^2}{m\,32.2R} = \frac{\text{ELEVATION}}{\text{BASE}}$$

"THEORY OF BANKING ANGLE"

(GREATLY SIMPLEFIED)

tion "dynamic balance." This means that the forces are balanced. If the arrows representing the forces are redrawn as in Fig. 2, we see that they form a (closed) triangle. We also see that since two of the legs of this triangle are perpendicular to the base of the track and the track respectively we conclude that the angle of this triangle and the angle of the banking are the same. From trigonometry we can calculate this angle by taking that ratio of the rise over the run. Thus: tangent $\beta = \frac{F}{g}$

To make our calculations simple, the *graph* shown has different speeds plotted against banking angles and radius of turn. To find the proper angle, pick the car speed on the vertical line and move horizontally to the right until you reach the curve of the desired radius, moving straight down at this point allows you to find the banking angle.

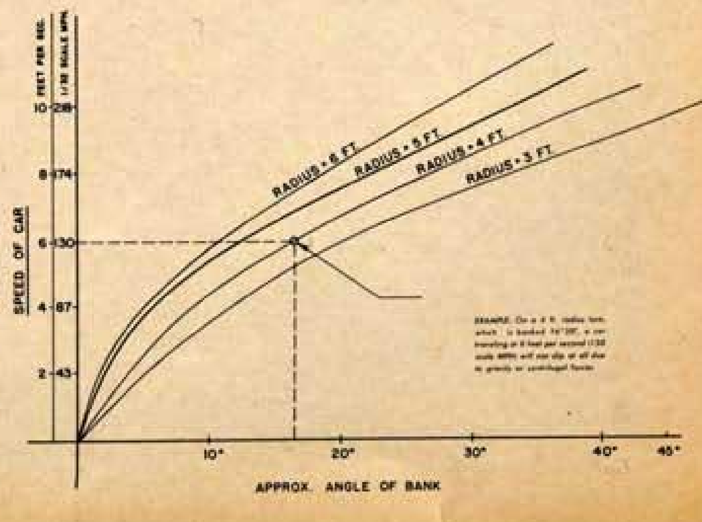
Since cars travel at different speeds, and, since cars running abreast turn at different radii, it is impossible to work out one particular angle of bank for any track.

The foregoing is merely a guide to selecting the approximate angle, For instance if you are planning a banked turn at the end of a 20 foot straight, it is likely that your cars will be running at around 9-10 feet per second when in proper tune. Taking the second lane of the track at, say, 4 foot radius, the angle of the bank should be approximately 38 degrees. This will provide cornering without sliding. If the angle is less, the cars will have to four-wheel slide around the turn. It is recommended that you make the turn at less than the ideal angle since the slower cars (or, cars that have to stop on the turn for some reason) will simply slide down or, might even de-slot completely.

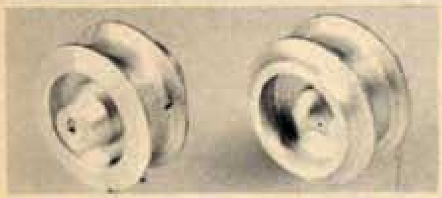
The best method of making a banked turn is to cut the particle board or plywood base to the desired outside radius. Cut the slots as well. (See picture A). Then, slip a few wedges under the outside of the track to elevate it. This works well for moderate turns. If more banking is required, cut the base board right through just inside of the inside lane. This will allow you to elevate the center of the turn as well. When a really steep turn is to be made, make this section separately from the same material as the base. Then, cut the base a foot or so before the banked turn is supposed to start. Raise this section and join it to the separately cut turn. If the separate turn were attached to the base at the level of the base, a discontinuity would result and the cars would bounce when entering or leaving the banked turn. Picture B shows the idea clearly.

Some people prefer to make the banked section out of strips of hardboard cut to the desired radius and fastening it to wedge shaped pieces of plywood. It is difficult to achieve good results with this method.

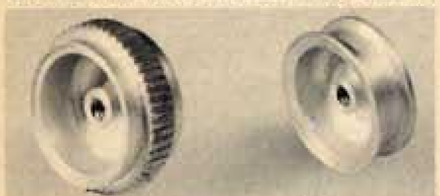
Banking is only used for high speed ovals or, where due to cramped space this is the only way to keep speeds up. A true road course rarely has turns banked at more than 2-3 degrees. (Witness the last turn on the Riverside track.) On the Monza circuit, the banking is very steep, however, this was built in the old days when sheer speed rather than good handling was the order of the day. The centrifugal force causes the springs in the suspension to deflect so much that some cars touch their bottoms to the pavement. Fortunately in slot racing we do not have to worry about this. Or do we . . .?



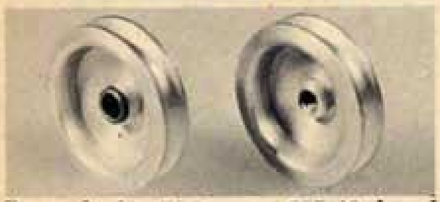
SLOT RACING PRODUCT PROFILE: GAR VIC



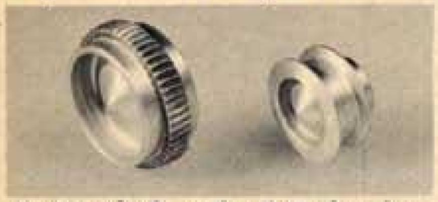
1/32 wheels for Corvair and Special.



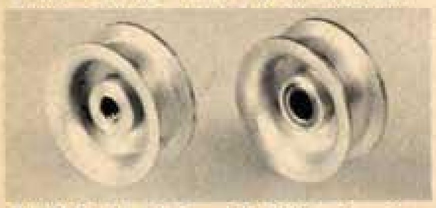
1/25 scale scoop wheels.



Drag wheels with bearing & 5-40 thread.



Cone wheel with 5-40 threads.



1/32 Scale plain with Oilite bearing.



Bullet wheels



Plain 1/32nd front and rear wheels.



Gar Vic independent axle kit.

Most slot racing enthusiasts will, from time to time, be tempted by a newly developed components. This series of articles is designed to provide racing buffs with up-to-date information on reliable manufacturers with worthwhile products.

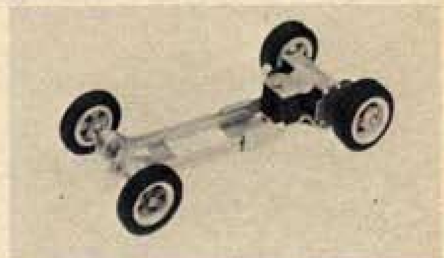
NO STRANGER to most serious enthusiasts on the "scale trail," this North Hollywood firm was the first to introduce matching Mag wheels for racing fans seeking more realistic components. The wide rim machined aluminum competition rear mag has a knurled and raised center with extended sides for greater traction and alignment of tire. The matching front mag is now available with oilite or 5-40 center hub.

Newest addition to the Gar Vic line of chassis is their Big 3 series that combines light weight rigidity, low center of gravity and infinite wheel base adjustment. Designed for Pittman 704 and 705 motors, they will fit 1/32 thru 1/25 scale bodies and are fully adjustable with minimum assembly work. Units retail from $2.75 (with conventional front end) to $4.00 (for ballbearing front end).

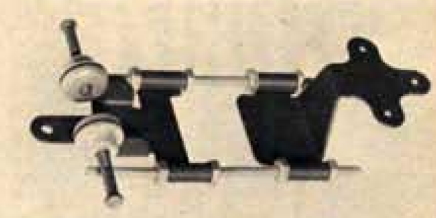
Noted for their original thinking in product design, Gar Vic currently has on the drawing boards, motor, chassis and wheel combinations, without bodies, that should cause quite a stir among the "go fast boys." The new items, like those currently available should be competitively priced and very durable.

For the hobbyist handy with a checkbook, Gar Vic will soon offer a radio controlled racer powered by a 4 cycle, four cylinder water-cooled engine. Slated for distribution in July, the car will have a 24-inch wheelbase and independent suspension on all four wheels. Price will be around $300. For commercial tracks and clubs, a new photo electric lap counter with an accuracy to 1/1000 will soon be offered for $150.

Many companies heretofore engaged in other activities have jumped firmly into what appears to be a slot racing seller's market. Gar Vic has made an honest effort to determine slot racer's needs and develop a worthwhile product. Those shown on this page are but a random sampling of their most popular items.



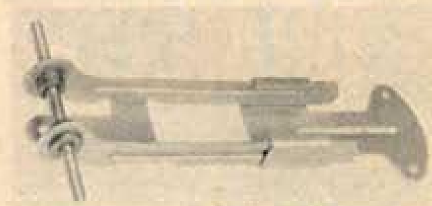
Sled with independent front axles.



1/25 Scale for Pittman 704 motor.



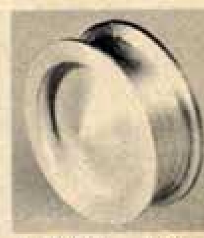
Adjustable with ballbearing front end.



Conventional front end chassis.



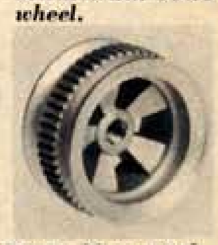
Natural rubber replacement slicks.



1/25th Scale aluminum cone wheel.



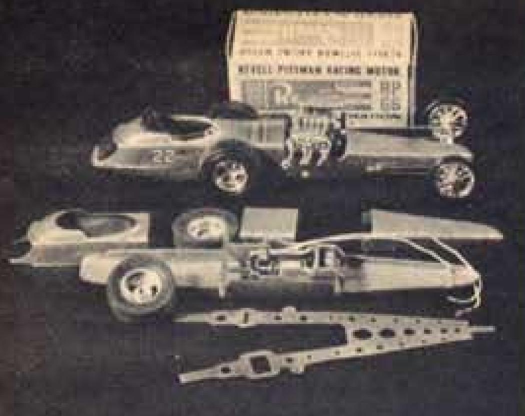
Front Mag retails for $1.40 with 5-40 thread.



Rear Mag with 5-40 thread is $1.50 pr.



Aluminum or brass bearing housings



MOTORIZING REVELL'S TONY NANCY DRAGSTER

HERE'S ONE YOU CAN MAKE FOR GO AS WELL AS SHOW

By Bob Hoeppner

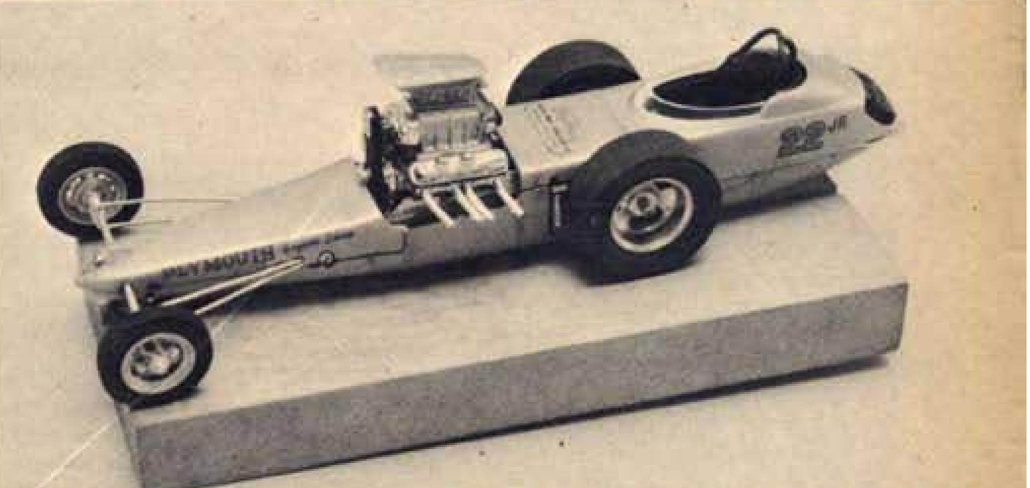
ANYONE interested in model car racing is aware of the two fields of interest, road racing and drag strip. Of the same basic orgin, they now have advanced on widely divergent lines. Drag racing, following somewhat the same general classifications of prototypes, has had a much more relaxed set of rules than imposed upon those participating in road racing. Perhaps this "anything goes" set of rules has had something to do with the decrease in popularity this sport has shown in the last year. Speeds have shown a steady increase. Competition is very close in all classes. New ideas and refinements of existing set ups are being used daily in an effort to shave a few hundreds of a second off the clock.

Competition and new ideas are wonderful and the back bone of any participating sport or hobby, but don't you think it's time to stop and take a look at the direction this sport is heading?

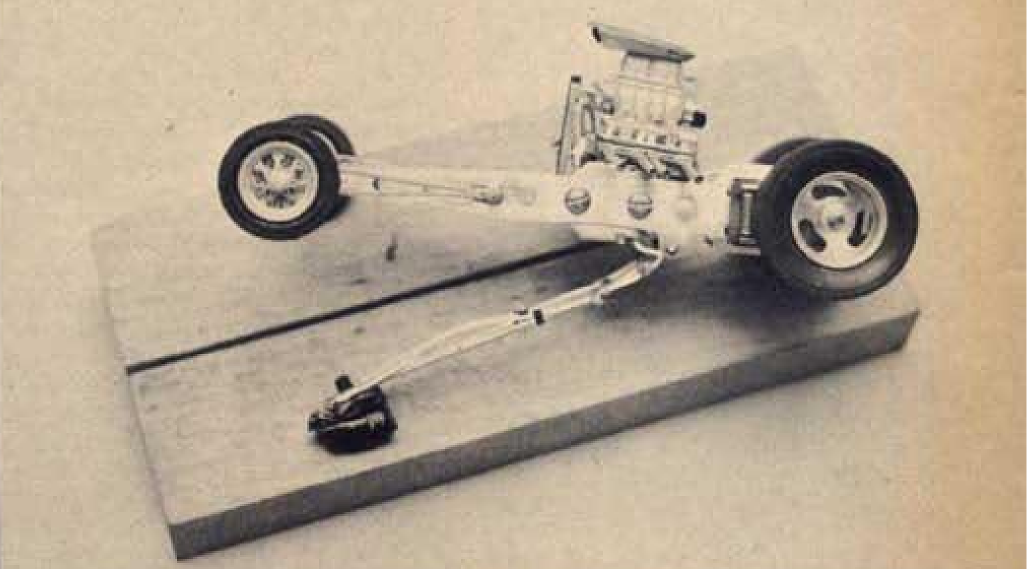
The days of assembling a car from stock components straight out of the box and having half a chance of blowing off the opposition have disappeared. Special custom built setups including complete motor rebuilding with ball bearings and special balancing have become almost standard equipment to be in the running.

Today, most top contenders in the dragster division in no way resemble, in scale, size and shape, the actual cars involved in competition on the local drag strip. Scale appearance is very loosely adhered to if at all. The fight to be top man in any class now requires a great deal of time and money to be competitive. While fun for a few, it is bound to cause the majority to lose interest because of being too involved. Not all of us have the shop or equipment to build this type of car.

The main reason any of us are building and running cars is for the fun and competition involved. Looking at the road racing section of the sport for awhile we find lots of fun and good competition, few classes or divisions and all running on the same amount of



IT LOOKS LIKE A STATIC DISPLAY MODEL BUT PACKS A PUNCH ON A DRAG STRIP.



SWING PICKUP IS MADE FROM 1/16 BRASS ROD BENT TO SPRING INTO LOCATING TABS.

REVELL'S RP-66 PROVIDES THE JUICE TO THE 3-1 GEAR RATIO.





Opened nose section shows frame in place. Two top body panels were glued together and snap fitted under upholstery flange at rear of roll cage.

power, 12 volts D.C. So it appears that an unlimited amount of power and many class divisions are not entirely necessary to have fun in running model cars. In full scale its another story.

If the persons interested in promoting the welfare of model drag racing would put more emphasis on scale and over the counter assembly items, it would appeal to a larger participating group. Bring the voltages down somewhat and make start buttons mandatory on all strips. A win then would depend as much on the reactions of the driver as the performance of the car. By all means do not eliminate the all out, go for broke boys, every sport needs its experimenters but lump all the specials into a group of their own.

A large number of classes would be available if divisions were made depending upon scale, body style and perhaps by motors used. This would require some means of evaluating motor performance to maintain equality in classes to prevent a Pittman 195 from running against a 85X, at least in class.

The ability to have something competitive within a limited time and cash outlay would be appealing, and if it has a chance of winning in class so much the better. This should act as well as a blood transfusion to an interesting sport that looks as if it is heading in the wrong direction.

The Tony Nancy dragster was motorized as an example of the previous statements made regarding scale appearance and the use of stock items in assembly. The motor, gears, wheels and tires are all stock items available to anyone.

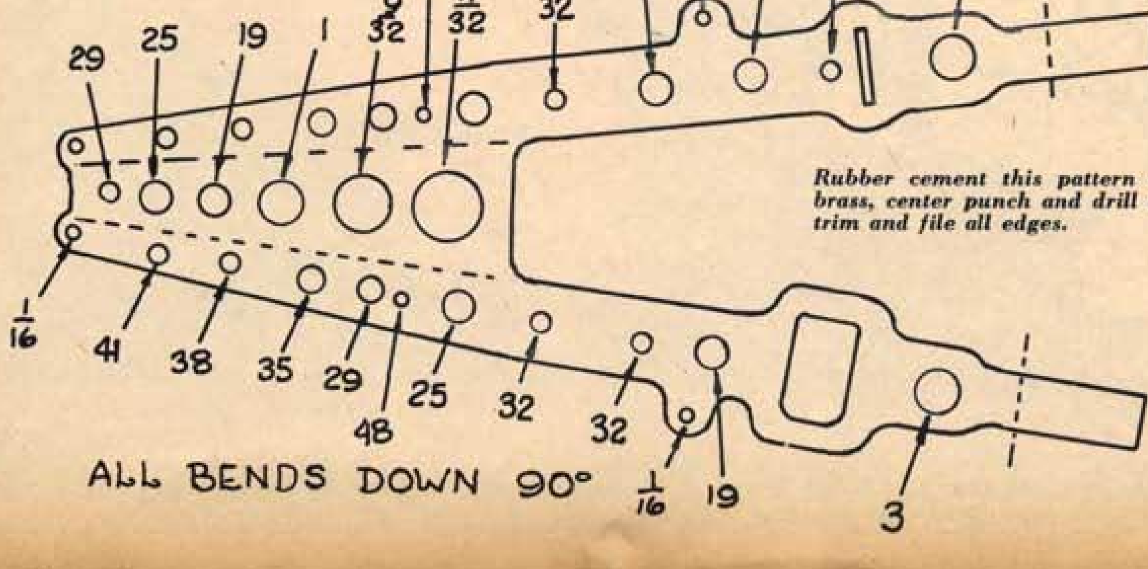
True, by present standards it would be an also ran, but if a group of cars similar in power and construction were competing together, the competition would be close and you would have as much fun. Even outsiders would be able to identify your craftsmanship as a car.

The present lack of a variety of stock frame components for dragsters requires that this item be hand made. But by using a little planning in design, the concept can be duplicated by anyone with a minimum of tools.

The small overall dimensions of the car made it a real challenge to find room for everything and still maintain an acceptable appearance. As you will note from the photos and drawings, the frame is one piece and care must be used to maintain dimensions to prevent misalignment.

Time required to accurately layout, drill holes and make the bends in there proper positions will more than pay for itself. 24-gauge half hard sheet brass was used for the frame. Lay out the pattern or if you can part with part of a page from your magazine, use the pattern accompanying this article. Use rubber cement to stick it to the brass. Center punch and drill all holes, then trim and file all edges. When complete, bend

continued on page 55

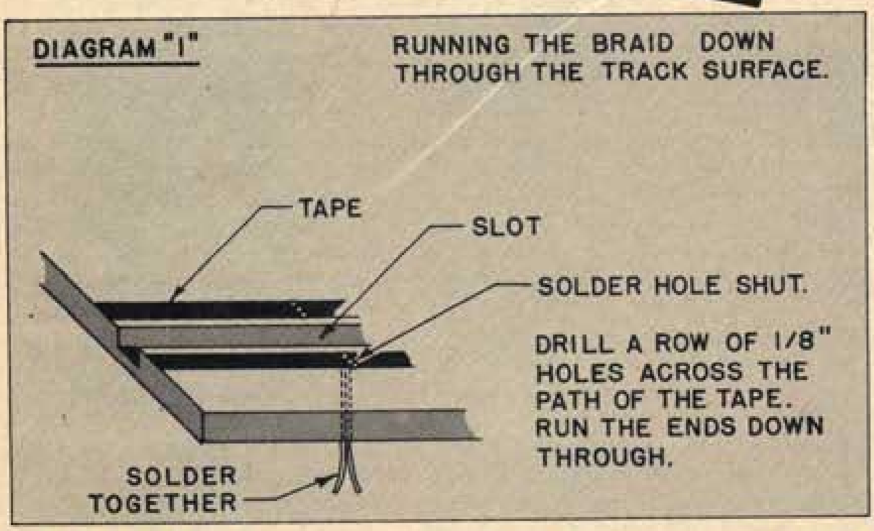


Rubber cement this pattern to a piece of brass, center punch and drill all holes, then trim and file all edges.

Sophisticated TRACK CIRCUITRY

ORGANIZE YOUR WIRING FOR MORE SLOT RACING PLEASURE

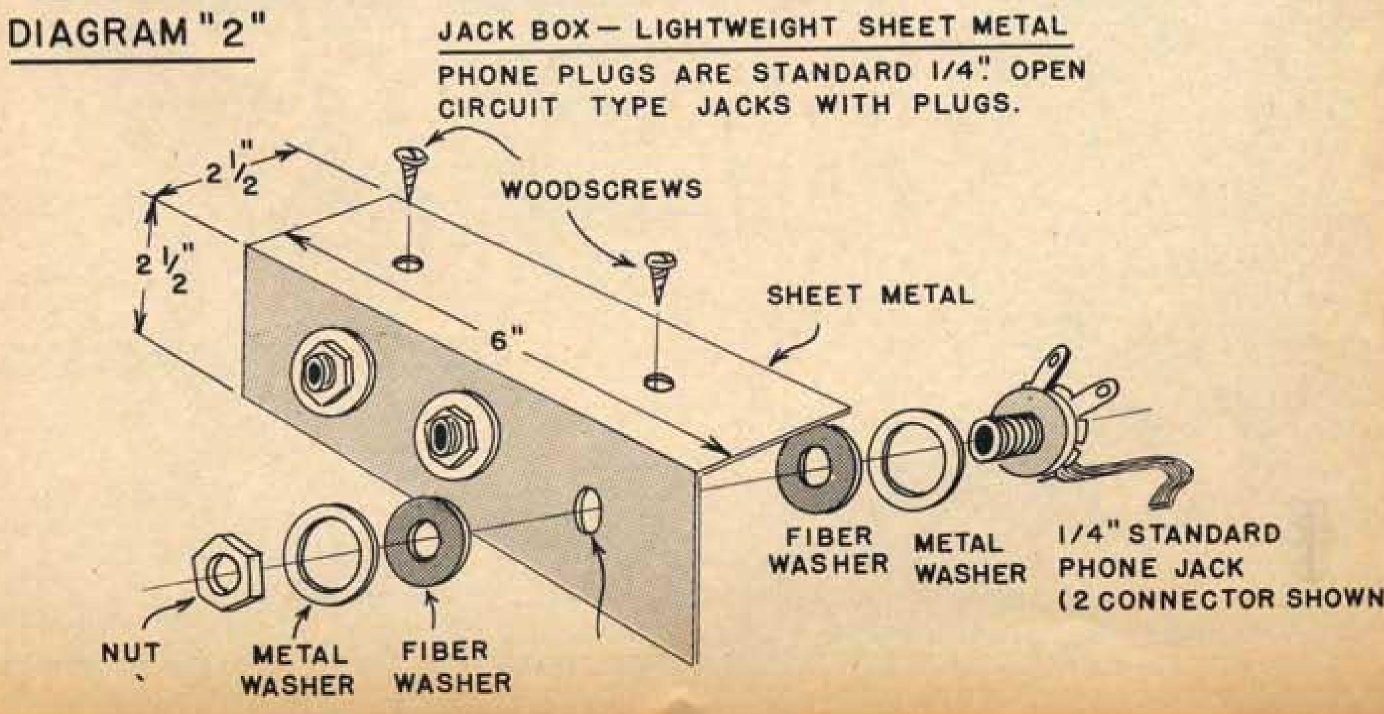
By Raymond E. Hoy



FOR SOME OBSCURE REASON I continually find myself comparing the average slot racing fan to the hi-fi buff. Take a look at the equipment sitting before a high fidelity do-it-yourselfer, and you'll see a truly excellent piece of equipment, well designed, beautifully constructed, and usually very advanced. Much the same with the slot racer and builder. He is usually well out of the amateur class, possessing elaborate and advanced components.

Why the comparison then? Why pick on the hi-fi enthusiast in particular to compare with the follower of our beloved slot racing sport? I'll tell you why. Look closely at the equipment belonging to both enthusiasts. There are wires running all over the place! It seems almost as though once the actual labors of construction had finished, and the thing was actually working, that the builder couldn't bear to finish up the odds and ends, not with his brain child actually WORKING!

The slot builder, in my opinion, is particularly guilty of this, and who can blame him? The long tedious hours of construction are a thing of the past, the control handle is warm in his hand, and



his pride and joy is hot-lapping the circuit at a ferocious rate. Who cares if he has to pick the control handle up out of a pile of debris, and if he has to continually stop to re-fasten a hastily connected wire.

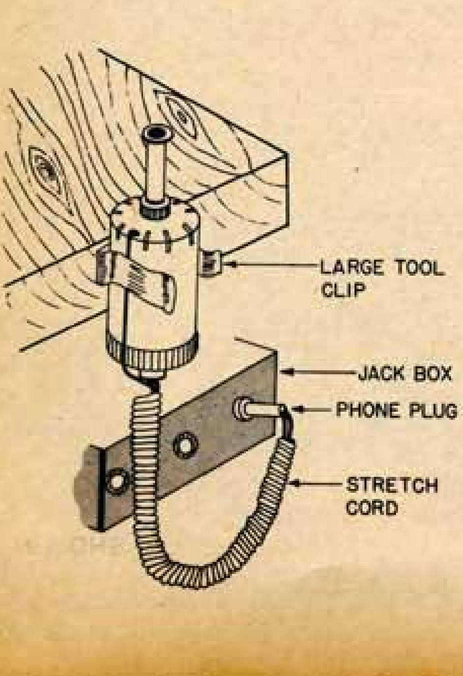
I care, for one. I've never seen wires lying all over the track at Elkhart Lake or Meadowvale Raceway. Neither have you. We're shooting for realism, right? So let's build that track right! Let's get the wiring out of sight and finish up the table top layout the way it should be done.

Let me start off by describing my own track. My outfit is fairly conventional, being built of 3/8" particle board. It is a braided, four lane track, in a roughly shaped figure eight, with elevations and a crossover. It is contoured and it has a 12 volt battery and battery charger for power, as I described in the SLOT RACER'S WORKSHOP in the January 1964 issue of MCS.

My track is wired for dynamic braking, and has a jack box and telephone stretch cords connecting the jack to the control handle. Between the track and the power supply I have mounted four, double-pole, double-throw switches, hereafter referred to as DPDT switches. With just a punch of the button on one of these switches, I can change the polarity of that particular track, without affecting the other lanes.

It is an absolute pleasure to race on this course. I can race all day without ever fooling around with the track. My car may go to pieces, but my track won't.

For materials you will need as many three-connector jacks and plugs as you have lanes, an "L" shaped jack box, telephone stretch cords, and DPDT switches, all of which are available from Allied Radio in Chicago, or probably from your local radio or TV shop.

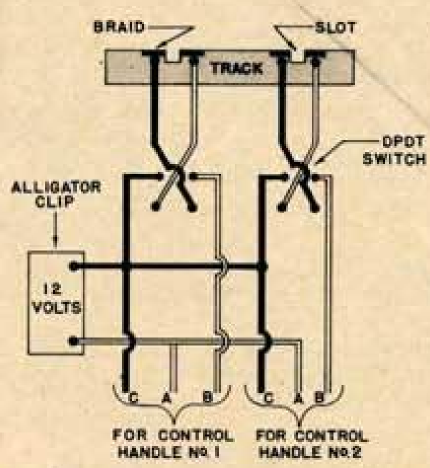


Start off by determining where you want your jack box to be located. Then, right in front of that location, arrange it so the two ends of each conductor, (braid or tape) meet, and run down through the particle board and under the table. I did this by drilling a row of eighth inch holes side-by-side as shown in diagram one. Insert the ends of the braid down through the hole and then solder the hole shut, and underneath the table, solder the two ends together to complete the circuit. Do this on each lane.

Next, build the jack box as shown in figure two. Fasten this to the table and temporarily leave the jacks disconnected from the jack box. It is much easier to wire each jack and insert them into the jack box later.

Start the actual wiring by running the common wires, (Number 22 wire works fine) from each lane to the proper connection on each DPDT switch as shown in diagram three. Run another wire from the left center connection on each DPDT switch to one side of the battery quick-connect device, which is a large alligator clip, available from any automotive parts store. This clip enables you to disconnect the battery from the track quickly. Also, run another wire from each left center connection of the DPDT switch to each "C" connection on each phone jack. This will complete the common-side wiring between the track and the phone jack. It is a good idea to use a different color wire so you can tell at a glance at a later date, just which wire you actually have hold of. For instance, Blue wire for the cold side, Red for the hot side, etc.

DIAGRAM "3" — TRACK-THRU D.P.D.T. SWITCH TO BATTERY AND JACKS.

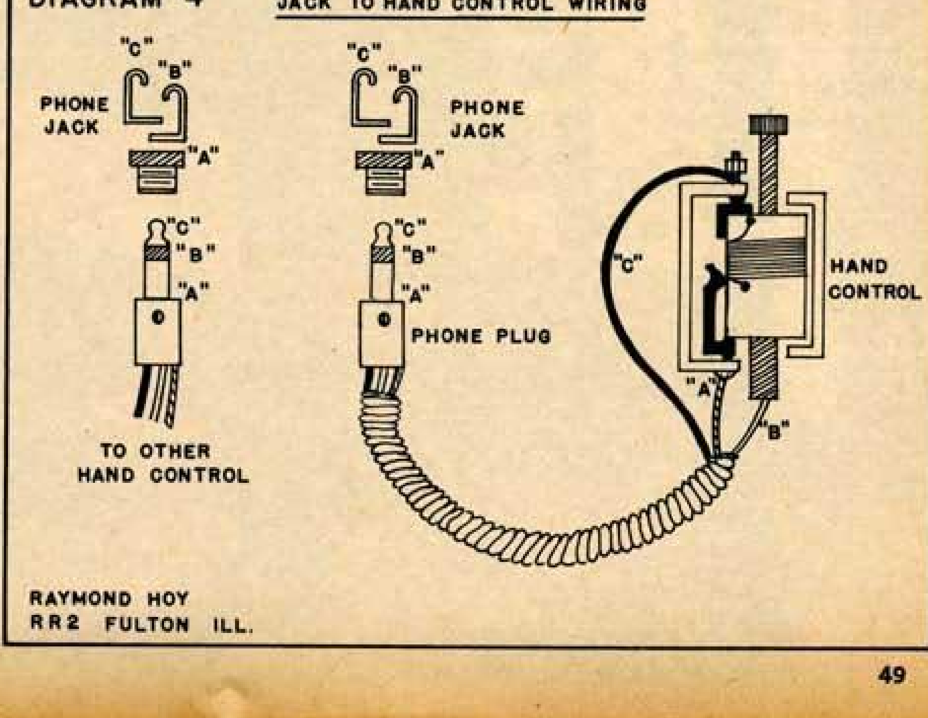


Next, run a wire from the other side of each lane to the right front connection on the DPDT switch, and then from the right center connection to each "B" connection on the phone jack. This completes the hot-side, track to phone jack wiring.

From the other side of the battery, run a wire to each "A" connection on the phone jacks. The only wiring left now is from the phone plug to the control handle. Simply connect each control handle and plug as shown in diagram four. A wire from "A" on the jack to "A" on the control handle, and then the "B" and finally the "C" connections.

Now insert each jack into the jack box and tighten down. Fasten the metal hold-down on the jack end of the stretch cords, to the underside of the table so you are not pulling against the wiring. Screw each large tool holder to the table as shown. These are used as a holder for the control handles when they are not in use.

DIAGRAM "4" JACK TO HAND CONTROL WIRING



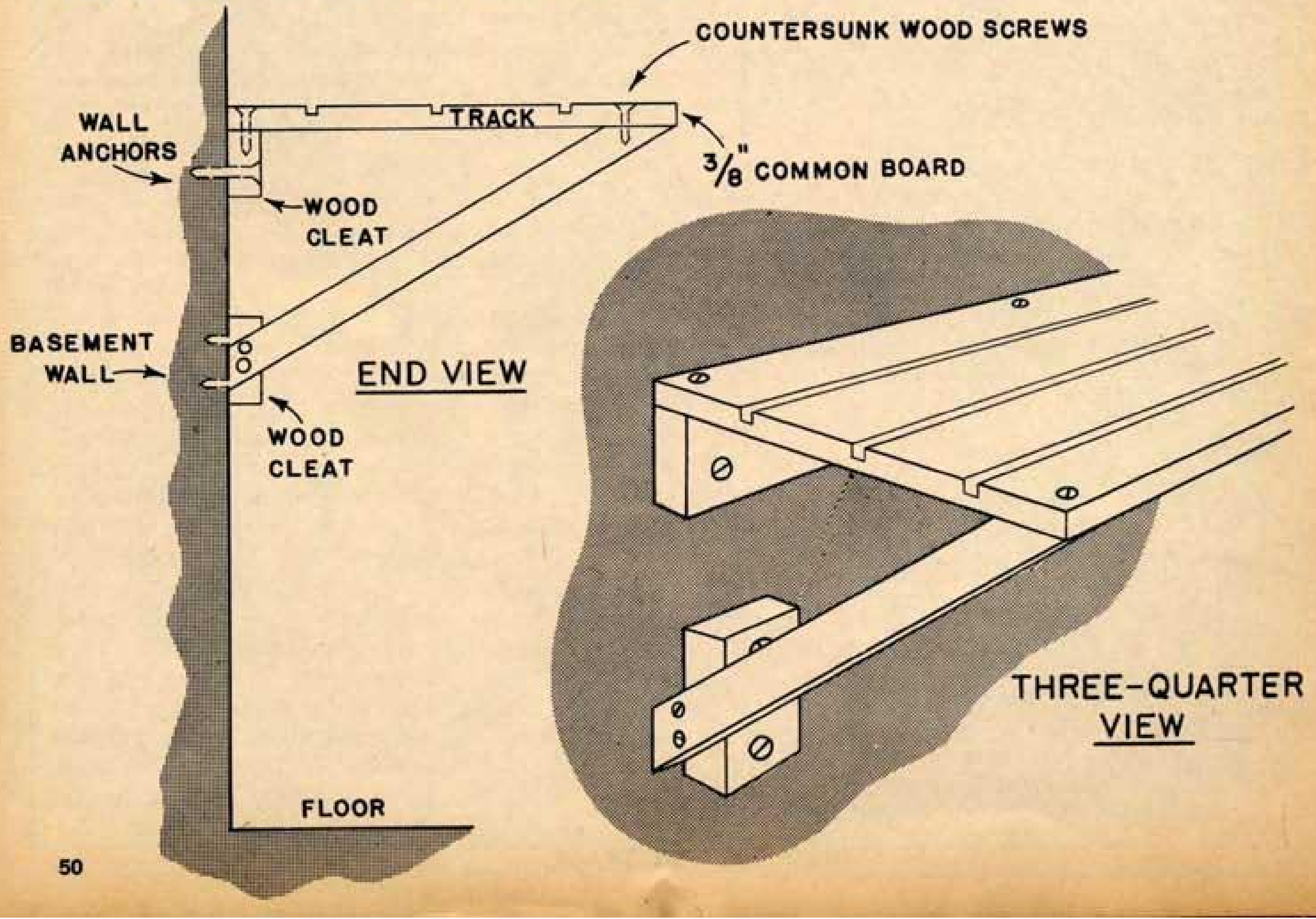
SLOT RACER'S Work Shop

NEW IDEAS IN RACING MODIFICATIONS

ECONOMICAL WAY TO EXTEND YOUR TRACK AREA WITHOUT A TABLE

Why stop at the edge of your table? Here's a way to extend straightaways all the way down the wall of your basement. Buy good quality 3/8" common boards in any length you wish, from your lumber yard. Cut slots to match your track, using a table saw to proper depth. On your table, run the track right to the edge of the layout and take off from there with the common board. Run it along the wall at whatever height you wish (it may undulate or run level) by mounting it to the wall using lead screw anchors to fasten wood cleats to the concrete wall. The track attaches to these cleats. Use Sears & Roebuck lead screw anchors, number 9A-71711, 1/8 x 3/4 anchors which accept a wood screw in size 5, 6 or 7, and with a 1/4" drill. Price—75 cents for a pack of 25.

Place the wood cleats, which are any size you wish, as all they are used for is to anchor the track and track brace to, at any height from the floor and anchor them to the wall with long wood screws, inserted into the lead screw anchors. Now fasten the track and the track brace to these cleats as shown in the drawings. When you are satisfied with the solidity of the track (place as many cleats and braces as you wish) then you can go ahead and tape or braid the track and hook it up. By placing one set of the cleats at one height from the floor, and then further down the wall placing it at a different height, you can make the straight section of track climb and dip like a real mountain road. I would strongly suggest using a rubber band fence or similar barrier on the side of the road next to the "open air" side of the track.



CROSS OVER AND DUAL CONTROL MODIFICATION

The dual control system described in the February issue of MCS can easily be adapted to a most interesting course. For two cars, cut just *one* cross-over into the track. This means that each car will run on both tracks, thus lap distances will not have to be equalized, (see the diagram).

If there are several slots, make a cross over for each "lap." After the last lap the slot is carried over to the first one again. To be able to control several cars, the tapes have to be laid on different spots and a rectifier type power pack has to be used for *each two* cars.

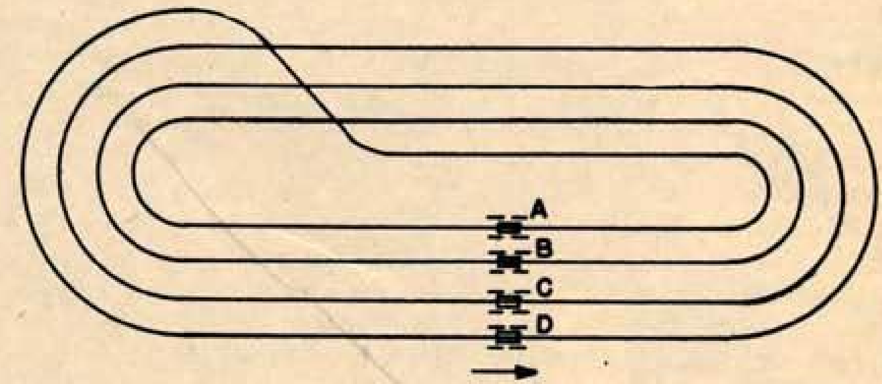
The track is thus a giant spiral and lap lengths do not have to be equalized. Thrills, spills and chills as the cars race for the crossover.

POWER TAPES



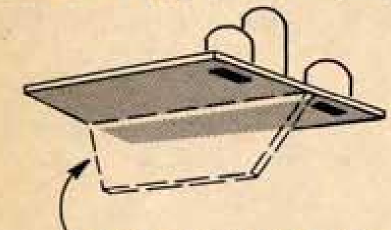
TWO POWER-PLANTS ARE USED
(SEE FEB. ISSUE OF M C S)



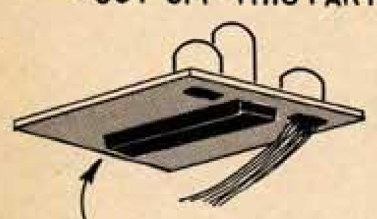


MORE REALISM FOR TRACKS BY SLOT RACING WITHOUT A SLOT

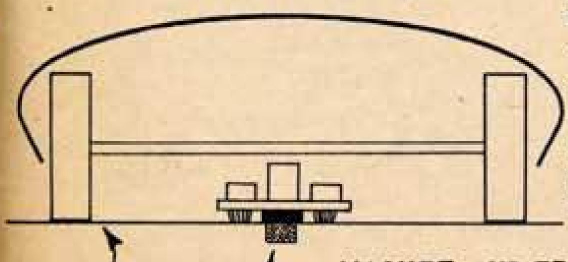
REGULAR FLAG (PICKUP GUIDE).



CUT OFF THIS PART



FASTEN 10 BAR-MAGNET HERE. (EPOXY WILL DO)



TRACK

MAGNET AND FRONT WHEELS ARE OR SAME LEVEL!

STEEL STRIP SUNK IN SLOT ON TRACK.

In previous issues of this magazine various ways of making scenery were shown. Landscaping improves the overall picture tremendously. Trackside accessories e.g. pits, signs, haybales also add to realism. The only thing remaining now is eliminating the power tapes and slots. On some HO scale sets you'll hardly see the power tapes. They are recessed into the track surface. On most other sets, especially 1/32 scale, the slot and tapes present an unsightly appearance. Here is a simple but effective way to improve on this:

In a neighborhood machine shop, have strips of cold rolled steel made up with a cross section equal to the space in the slot of your course. Have the strips finished by a metal finishing shop. Since most road surfaces are black, you can get the steel strips coated with "black chrome" (in some areas it is called by different names). Lay the strips into the slots. Cut off the vertical section of your pickup so only the shaft and pickup wires remain on. Now fasten a small bar-magnet onto the pickup of your car. The magnet will stick to the steel strip in the slot while the pickup wires remain in perfect alignment. In home made tracks, you can remove one of the power tapes and use the steel strip as a conductor, just make sure that the various sections are electrically connected. A properly modified track will thus have only one power tape while the steel strip is almost invisible. (The strip need not be over 1/16" wide as long as the magnet is wider than the strip.) For best results, use cars that have steerable front ends.

It is obvious that the magnetic guide will not have as much cornering force as a regular guide. During extremely fast cornering the car may "come off the magnet." This will cut down on speeds and thus introduce further realism by limiting the car's top speed to the reasonable scale speed ranges.

CUSTOM TIPS FROM THE WORKSHOP

Planning A Club

I am planning on starting a Model Car Club. Could you if possible give me some tips on how to start one, what the dues should be, etc?

When I get the club together we are going to buy enough straight (9 inch) track to make a scale 1/4 mile drag strip, (for H.O.) Could you tell me how long a scale 1/4 mile for H.O. is? How many feet for shut down?

Jim Adkins
Libertyville, Ill.

Some very good tips on starting a club are expressed in an article in M.C.S. Feb. '64. Your dues should depend upon your club's aims, what things you wish to purchase and in what time period. Your dues could go up or down depending upon your expenses. Formulate a plan as to what you as a club wish to accomplish and in what time, find out what it will cost you and then determine what your dues should be to have the required money available when you need it.

Simple arithmetic will answer your questions on scale distances. H. O. scale is 1/87th of actual size or 1/87th of 1320 feet which equals 1/4 mile. This works out to 15.17 feet in H.O. scale. Your Aurora straights are 9 inches long so it will take 20 1/4 of these to equal your 1/4 mile strip. Shut down area need be only a few feet if proper cushioning to stop cars is used.

Wiring Lights

I am making working head lights. How do I hook up the wires to the battery? On my doors I cut them out but how do I cut the interior?

Bob Hall
Flint, Mich.

To complete your electric circuit on working headlights, all that is required is that one lead from each light be attached to the bottom of the battery and the other to the top. Generally, the two wires from each light are routed to some convenient spot and there joined into pairs where one lead from each light is joined to another wire forming a "Y." Do the same with the other two leads and then run the single wires to the battery. Attach one to the base and the other to the top of the battery. The switch can be placed anywhere in the circuit that will make mounting convenient. See the article on working lights in Oct. '63' M.C.S.

From your question, I would assume you have one of the A.M.T. kits with the single piece interior that looks like an upholstered bathtub, if so, line it up with the body section and mark the door opening on the interior. Remove and cut out the door panel area with an auto cutter or Zona saw, use scrap sheet plastic to space interior panel with outside door. Check fit with door installed and trim spacers until inside panel will line up with the rest of the interior section.

Spur Drive vs. Pinion

While reading the Sept. issue of MCS, I came across some outstanding road racing tips. I don't want to sound naive, but I was wondering why spur drive is better than pinion?

Tom Charlton
Batavia, Ill.

Gearing for model car racing generally falls into one of three types of installation: contrate, bevel and spur. Each has certain factors in their favor. The most generally used is the contrate, this is found on all commercially assembled, or kit type cars, Strombecker, Revell, Lionel etc. It is the cheapest to produce and allows more room for misalignment than the others. The contrate gear is punched from sheet stock and then formed into a cup, the gear tooth profile therefore cannot be perfect and the punching operation leaves a coarse edge to the tooth face. As the tooth face is somewhat thin and not equally shaped,

they can not be adjusted to as close a tolerance as the other types. The thin tooth face also allows a greater degree of misalignment without effecting operation.

The bevel and contrate gears are set up and operate in the same basic manner. Power is transmitted through a 90 degree angle, or stated in another way, the motor shaft is at a right angle to the driven shaft (the axle) so any power transmitted by the motor to the axle has to turn a corner. One other thing they have in common that the spur gear does not, is the fact that they both produce a side thrust on the axle gear. This thrust produces friction, as some means of counteracting it must be used or the gears will not stay in mesh. Spur gears operating in the same plane (both driving and driven shafts are parallel) do not produce a side thrust thus, other things being equal, will operate with less friction.

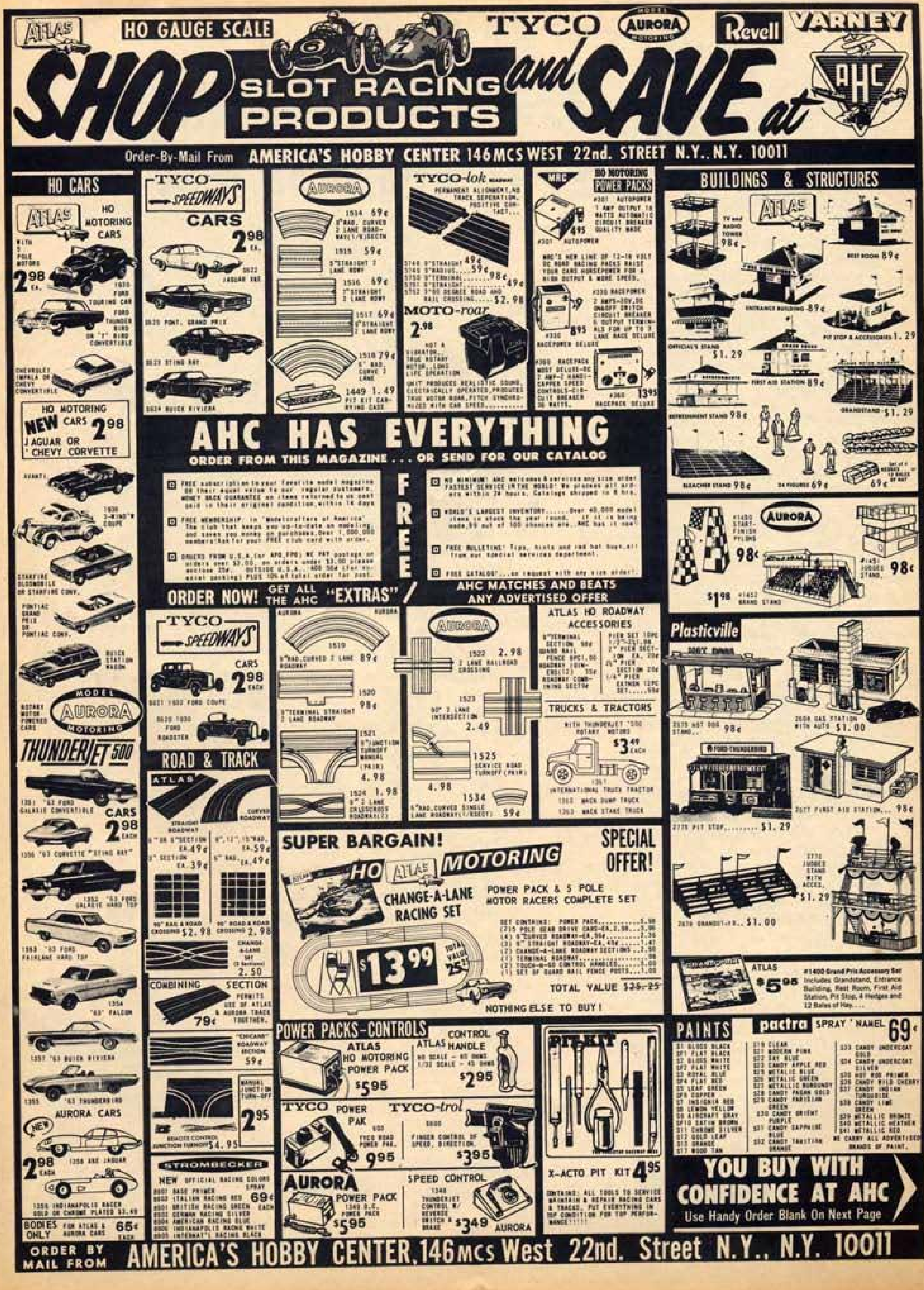
The bevel gears are the most expensive to produce due to the machining involved to produce the gear teeth. Close examination will show the teeth taper towards the center and, if cut without center relief, would all meet as knife

Smoothing Body Putty

I have been customizing cars for about five years. I have used putty often but it seems to turn out rough or with holes in it, how can I get a smoother finish on it?

Bill Van Skike
Lamar, Colorado

Generally filler or body putty will have a number of very fine air holes on the inside. These will show up when an area has been built up, then finished to shape and blended to surrounding panels. The holes can generally be filled by painting the area with primer and then wet sanded. It may take a number of applications to fill and blend completely, but it must be done to have a perfect base for final finishing.



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continued from page 47

down sides and rear tabs around a 1/32 radius. This will leave the rear spread too far apart so bend sides in slightly where they join the top triangle so they will run parallel. Adjust rear tabs if required to fit tightly together. The #3 hole will have to be opened up slightly to fit rear axle bushings from a Revell kit and perhaps the motor mounting holes to get a proper mesh on the bevel gears.

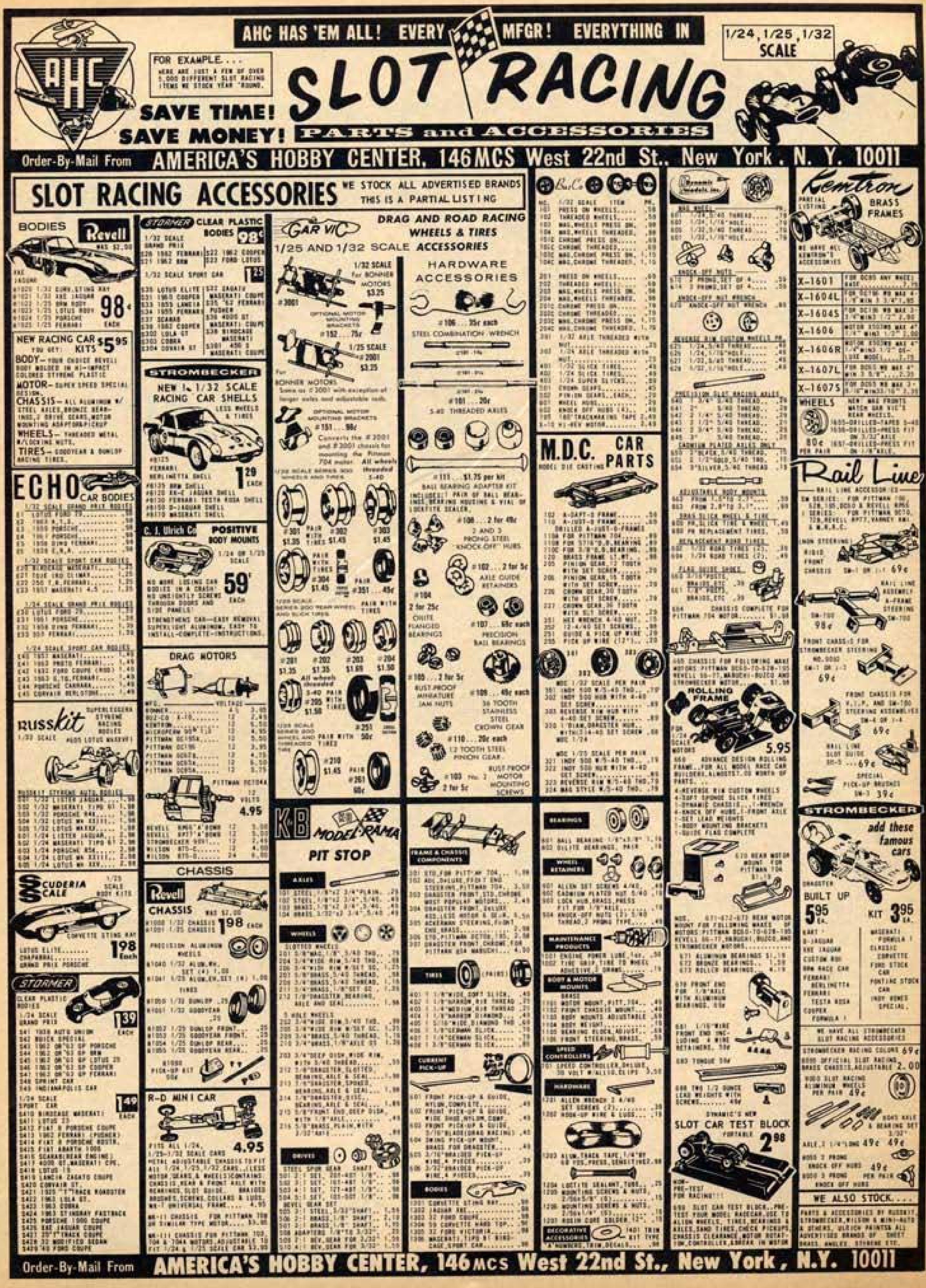
Tradeship 3-1 gears, or others of equal dimensions, should be used or adjustments in frame length will be required at time it is drawn out on the sheet stock. 3-1 gears were used in place of the normal (2-2½ to 1) for dragster as the diameter of the tires is somewhat large for the Revell RP-66 motor used to power this model.

Approximately 1/8 inch of the motor shaft is removed before installing the pinion to allow placement of motor weight as far to the rear as possible. The rear axle and bushings are stock Revell parts. Rear wheels are from Auto Hobbies and rear tires are Buz Co. Moving forward to the front end, the axle is 1/16 inch drill rod, with a short section of 1/16 I.D. tubing soldered between frame sides for centering. Radius rod attach flanges are of brass soldered to the axle and radius rods, which are made of straightened paper clips bent to the shape required. To preserve the prototype appearance we wanted to use the wire wheels included in the kit but there just is not enough hub to adequately bush. As a substitute we used the wheels in the Revell 4.1 Ferrari kit. These were glued and allowed to dry for a few days then the plastic tires were turned off on a lathe. Center holes were opened up and short lengths of 1/16 inch I.D. tubing were epoxyed in place. By turning a small groove in the rim, MRRC tires could be used.

The swing pickup is of 1/16 brass rod bent to shape, make rear end 1/4 inch wider than frame and spring into locating tabs.

The locating of the rear axle dictates the positioning of the body. The under pan is held in place by a bulkhead placed just behind the frame, using the screw holding rear frame tabs as a means of attachment. A small screw through the nose section will contain the front end. The two top body panels were glued together and contained by a snap fit under the upholstery flange at the rear of the roll cage.

We have had a lot of fun constructing our model and sincerely hope it will serve a twofold purpose, to provide some food for thought in dragging and if you decide to build it, showing how to have one for go as well as show.


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Actual Size

$.79 per pair

CATALOG NUMBERS

	5-40 Thread	1/16 Hole
1/24 Scale	601	603
1/32 Scale	605	607

REVERSE RIM CUSTOM WHEELS



Actual Size

New low price on reverse rim custom wheels. Deep rims with cross-hatch "positive-tread" tire grip. Fits all popular tires.

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CATALOG NUMBERS

	5-40 Thread	1/16 Hole
1/24 Scale	625	626
1/32 Scale	627	628



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Not to Scale

	CATALOG NUMBER
2 Prong	610
3 Prong	614

$.59 set of four

KNOCK-OFF NUT WRENCH



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CATALOG NUMBER 620

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